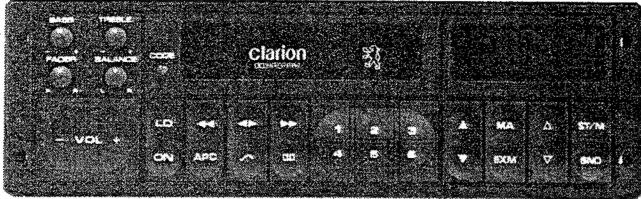


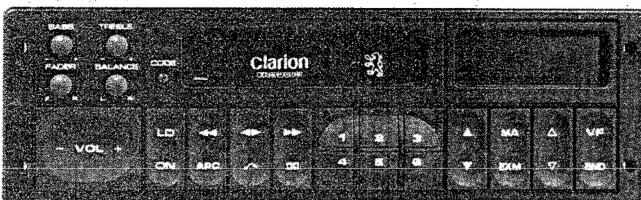
clarion

Service Manual

Published by Service Administration Section



PU-9357A-A



PU-9359A-A

PEUGEOT UKW・MPX/MW/LW RADIO CASSETTE COMBINATION

**Model PU-9357A-A
PU-9359A-A**

SPECIFICATIONS:

Radio section

Circuit system:	Superheterodyne
Tuning system:	Electronic tuning
Receiving frequency:	MW 531 to 1602kHz LW 153 to 281kHz UKW 87.5 to 108MHz
Intermediate frequency:	MW, LW 459kHz UKW 10.7MHz
Quieting sensitivity:	MW Less than 33dB (at 20dB S/N) LW Less than 40dB (at 20dB S/N) UKW Less than 12dB (at 30dB S/N)
Separation:	UKW More than 20dB
Auto. stop sensitivity:	MW DX 20 to 40dB LO 40 to 60dB LW DX 27 to 47dB LO 47 to 69dB UKW DX 17 to 33dB LO 35 to 55dB

Tape section

Reproduction system:	Auto reversing 4 track, 2 channel stereo cassette tape playback (Monaural also capable)
Tape speed:	4.76cm/sec. (1-7/8 ips)
Crosstalk:	More than 40dB
Separation:	More than 30dB

S/N ratio:	Normal	More than 45dB/53dB (Dolby-on)
	Metal	More than 47dB/55dB (Dolby-on)
Wow & flutter:		Less than 0.15% (W.R.M.S.)
FF/REW time:		Less than 100sec. (C-60)
Composite		
Load impedance:	4Ω×4	
Power output:	8W×4 (at 10% dist.)	
	More than 12W×4 (at max. output)	
Power supply voltage:	DC. 14.0V	
	Negative ground	
Power consumption:	Less than 7A (at max. output)	
	Less than 3mA (at BACK UP)	
Dimensions:	Width 178mm Height 50mm Depth 160mm	

- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
- "Dolby" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

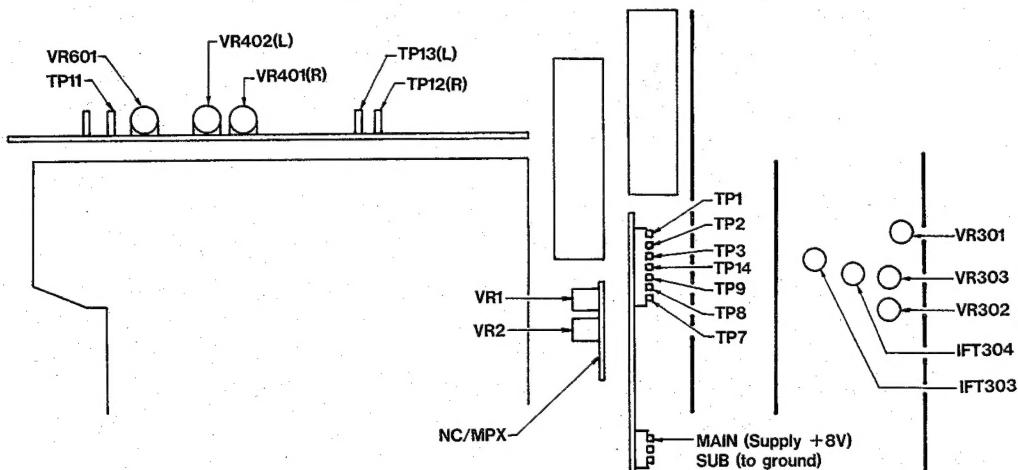
COMPONENTS:

Main unit	1
Mounting bracket	300-7516-00
Removable tool	341-1387-00

■ADJUSTMENT:

Adjustment item	Adjustment point	Procedure
Gain (MAIN)	VR301	1. Connect the digital voltmeter to TP3. 2. Input the 98.1MHz frequency at 15dB (MOD./f=22.5kHz) and adjust the level to $1.6^{+0.1}_{-0.3}$ V by VR301.
OV (MAIN)	IFT303	1. Connect the digital voltmeter to TP1 and TP2. 2. Input the 98.1MHz/25dB signal (MOD./f=22.5kHz) and adjust the reading of digital voltmeter to $0.000V \pm 30mV$ by IFT303.
SD	VR303	1. Input the 98.1MHz/25dB signal. 2. Adjust VR303 so that the voltage of TP14 is in the range OV to 5V.
Gain (SUB)	VR302	1. Connect the digital voltmeter to TP9. 2. Adjust the level by VR302 similar to MAIN.
OV (SUB)	IFT304	1. Connect the digital voltmeter to TP7 and TP8. 2. Follow the same adjustment steps as MAIN above. (IFT304)
SASC	VR304	1. Input the 98.1MHz/65dB, 7kHz modulation frequency, 30% modulation degree SSG signal. 2. Adjust the output level of the volume controller to 0dBm (0.775V) 3. Set the SSG output to 35dB and adjust VR304 so that the output level is -2dB.
Separation	VR1 (NC/MPX)	1. Input the 98.1MHz, connect the output of a stereo modulator to the external modulation terminal, and input a 65dB SSG signal. 2. Set the stereo modulator to the L or R ch and adjust VR1 so that the maximum separation is obtained.
Pilot canceller	VR2 (NC/MPX)	1. Input the 98.1MHz/65dB, modulation (PL 10%). 2. Adjust VR2 so that output of the set is minimum.
DK VCO	VR601	1. Input the 98.1MHz/65dB non-modulated SSG signal, and turn on VF. SW. 2. Connect the frequency counter to TP11 through a 22kΩ resistor and adjust VR601 so that the counter indicates 125Hz. In the case, 25sec. later, seeking occurs.
Dolby NR	VR401 and VR402	Insert a Dolby level test tape (400Hz-200nWb/m), connect the milli-volt meter to TP12 and TP13 and adjust VR401 and VR402 to obtain an output of $300mV \pm 1dB$. (Dolby SW : OFF)

●ADJUSTMENT POINT



<TAPE MECHANISM>

1. Head-azimuth Adjustment

Make playback for the azimuth-tape (8kHz, -10VU), and turn each azimuth-adjusting screw to make each FWD & REV maximum. After adjustment, make adhesion with bond.

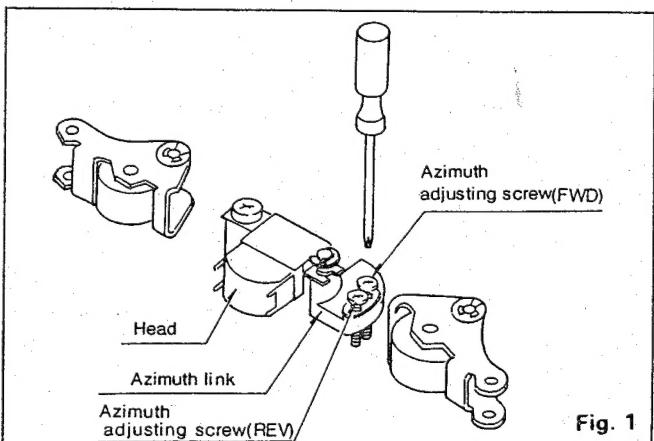


Fig. 1

2. Adjustment of Adsorption Plunger B

Under FF-operation, when adsorption plunger is released, mount the plunger to make the adsorption-surface of adsorption plunger B in parallel to the bent surface of plunger link B, and make adhesion of the rear side of the screw with bond.

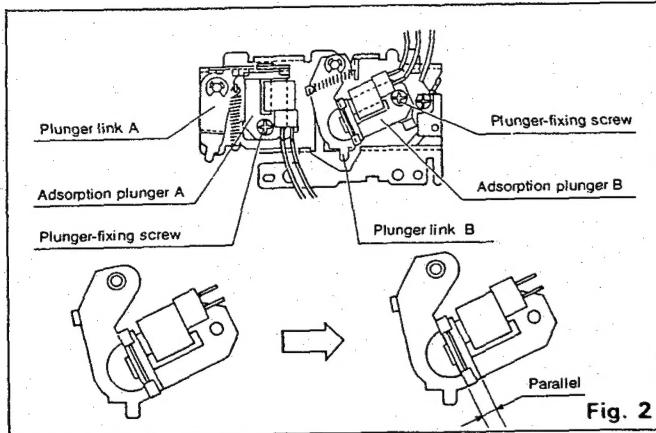


Fig. 2

3. Adjustment of Adsorption Plunger A

Under REW-operation, when adsorption plunger is released, mount the plunger to make the adsorption-surface of adsorption plunger A in parallel to the bent surface of plunger link A, and make adhesion of the rear side of the screw with bond.

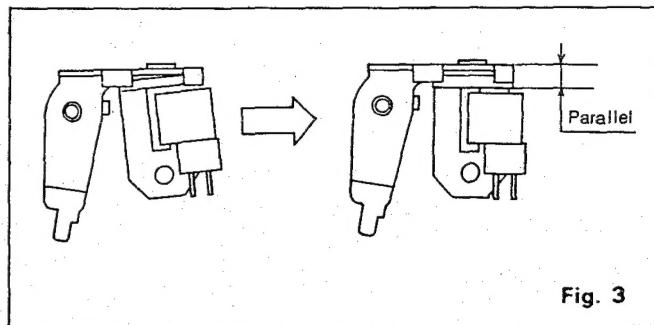


Fig. 3

EXPLANATION OF IC's:

Refer to description in IC service manual vol 1.

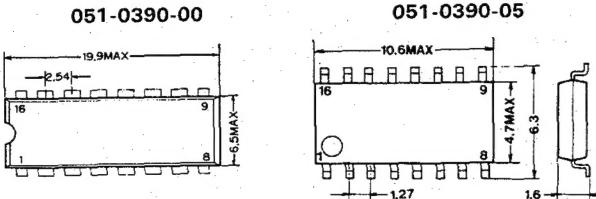
TC4066BP	051-0267-00	Quad Bilateral Switch	P39
μ PD4066BG	051-0267-55	Quad Bilateral Switch	P39
LA3365	051-0501-00	FM MPX Demodulator	P15

Refer to description in IC service manual vol 2.

NJM4558M	051-0350-55	Dual OP Amp	P39
AN6263N	051-0561-01	Music Interval Detection IC	P42
TMP42C70N8005	051-0740-01	Cassette Mechanism Controller	P83
TA7411AP	051-0798-21	FM IF System	P8
LA2220	051-0739-00	ARI System SK TYPE	P11

■ TD62104P 051-0390-00 Transistor Array
■ TD62104F 051-0390-05

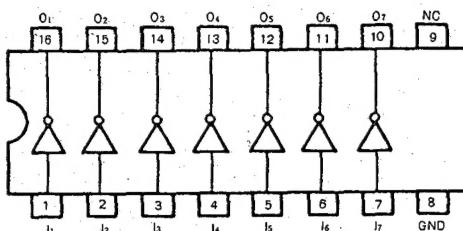
Outward Form



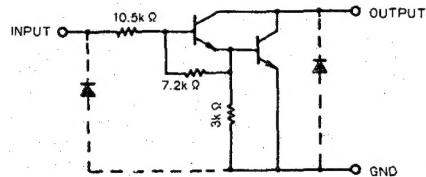
Maximum Ratings ($T_a=25^\circ C$)

Item	Symbol	Rating		Unit
Output voltage	V_{CE}	$-0.5 \sim 50$		V
C-E Sustaining voltage	$V_{CE(sus)}$	25		V
Collector current	I_c	0390-00	0390-05	mA
		500	350	
Input voltage	V_{IN}	$-0.5 \sim 30$		V
GND terminal current	I_{GND}	2.3		A
Power dissipation	P_d	0390-00	0390-05	W
		1.0	0.6	

Terminal Connection (TOP VIEW)

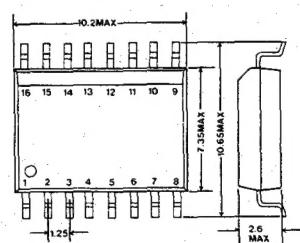


Equivalent Circuit (Unit)



■ μ PC1266G 051-0541-00 Diver Control SW.

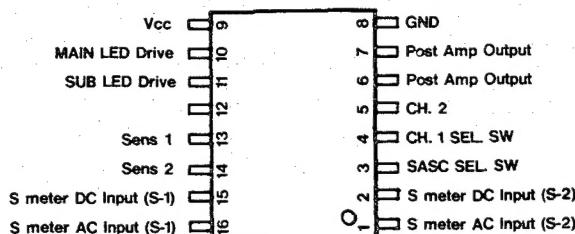
Outward Form



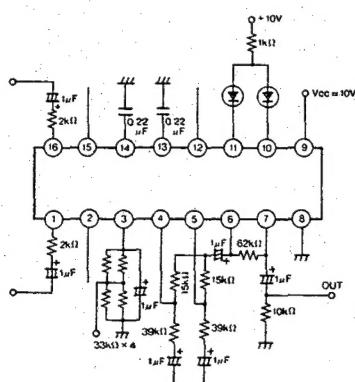
Absolute Maximum Ratings

Item	Symbol	Condition	Rating	Unit
Supply voltage	V_{CC}		16	V
LED drive voltage	$V_{10.11}$	10pin, 11pin Terminal voltage	16	V
LED drive current	$I_{10.11}$		40	mA
Power dissipation	P_d		250	mW

Terminal Connection



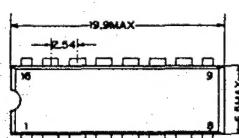
Equivalent Circuit



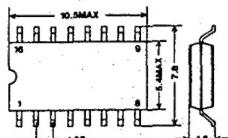
TC9173P 051-0904-00

■ TC9174F 051-0828-05 I/O Port Extension Interface IC's
TC9174P 051-0828-00

Outward Form



P type



F type

Outline

TC9173P and TC9174F.P are I/O port extension interface IC's of a digital tuning system controller LSI.

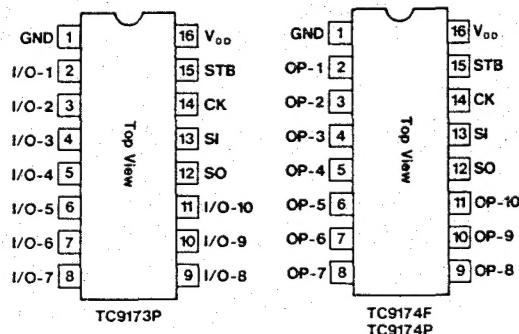
- TC9173P is for I/O extension, and TC9174F.P is for output only extension.
- Both types have 10 port terminals. TC9173P enables I/O setting bit by bit.
- TC9174F.P can take in output data from an SO terminal to the controller.
- The ports are all controlled by 4 serial path lines on the controller side.

Absolute Maximum Ratings

Item	Symbol	Rating	Unit
Supply voltage	VDD	-0.3 ~ 7.0	V
Input voltage	VIN	-0.3 ~ VDD + 0.3	V
Power dissipation	PD	F type : 300	mA
		P type : 600	
Output voltage	VOUT	20 (*)	V

(*) TC9174F.P only

Terminal Connection



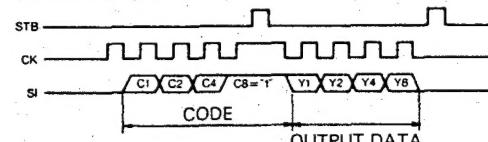
Terminal description

Pin No.	Symbol	Terminal name	Function/Operation	Remarks
2	I/O-1	TC9173P: General Purpose I/O Ports I/O setting on a bit-by-bit basis is enabled by a program.		
3	OP-1			
4	I/O-2			
5	OP-2			
6	I/O-3			
7	OP-3			
8	I/O-4		No. 1 ~ 10	
9	OP-4			
10	I/O-5			
11	OP-5			
12	I/O-6	TC9174F, P: Enclosed in parentheses are symbol names.		
13	OP-6			
14	I/O-7			
15	OP-7			
16	I/O-8			
17	OP-8	General pur- pose output ports		
18	I/O-9			
19	OP-9			
20	I/O-10	No. 1 ~ 10		
21	OP-10			
22	SO	Serial output	Data output ports for serial I/O ports, and Pch open drain output.	
23	SI	Serial input	Data input ports for serial I/O ports, and schmitt input.	
24	CK	Clock signal input	Clock signal input ports for serial I/O ports, schmitt input.	
25	STB	Strobe signal input	Strobe signal input ports for serial I/O ports, end schmitt input.	
26	VDD	Power supply	5 V ± 10% is applied.	
27	GND			

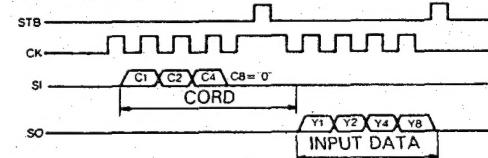
Timing chart

The ports are all controlled by 4 serial path lines (SI, SO, CK and STB) by the controller.

OUTPUT MODE

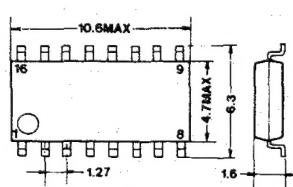


INPUT MODE



■ TD62305F 051-0829-04 Darlington Transistor Array

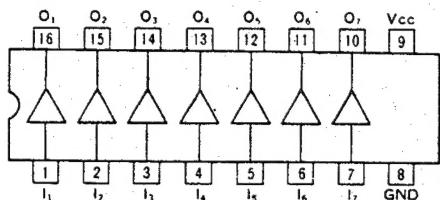
Outward Form



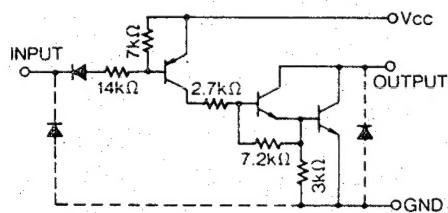
Absolute Maximum Ratings

Item	Symbol	Rating	Unit
Power voltage	V _{CC}	7.0	V
C-E Sustaining voltage	V	35	V
Output current	I _{OUT}	350	mA
Input voltage	V _{IN}	7.0	V
Input current	I _{IN}	-10	mA
GND terminal current	I _{GND}	2.3	A
Power dissipation	P _D	0.625	W

Block Diagram



Circuit Diagram



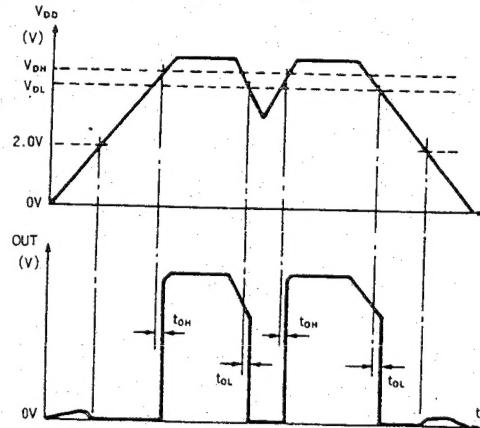
MN1280-G 051-0840-06
 MN1280-L 051-0840-10
 MN1280-M 051-0840-11
 MN1280-N 051-0840-12
 MN1280-P 051-0840-13
 MN1280-Q 051-0840-14
 MN1280-R 051-0840-15
 MN1280-S 051-0840-16
 MN1280-T 051-0840-17
 MN1280-U 051-0840-18

IC for voltage detection

Detected Voltage

Rank	Item		Unit
	min	max	
MN1280-G	2.4	2.6	V
MN1280-L	3.0	3.3	V
MN1280-M	3.2	3.5	V
MN1280-N	3.4	3.7	V
MN1280-P	3.6	3.9	V
MN1280-Q	3.8	4.1	V
MN1280-R	4.0	4.3	V
MN1280-S	4.2	4.5	V
MN1280-T	4.4	4.7	V
MN1280-U	4.6	4.9	V

Description of Operation



Note 1) As operation is not guaranteed at supply voltage of 2V or less, no output can be defined.

2) V_{DL} : Detected voltage when supply voltage is low.

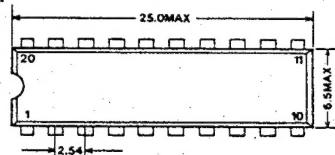
V_{DH} : Detected voltage when supply voltage is high.

t_{OH} : Time from rise of supply voltage to V_{DH} until the output reaches High level.

t_{OL} : Time from drop of supply voltage to V_{DL} until the output reaches Low level.

TA7764P 051-0888-00 Dual Channel Volume/Tone Control

Outward Form



Description

This IC is an electronic volume system to make one touch operation for switch and volume necessary for digital control of volume, balance, bass, treble, and loudness.

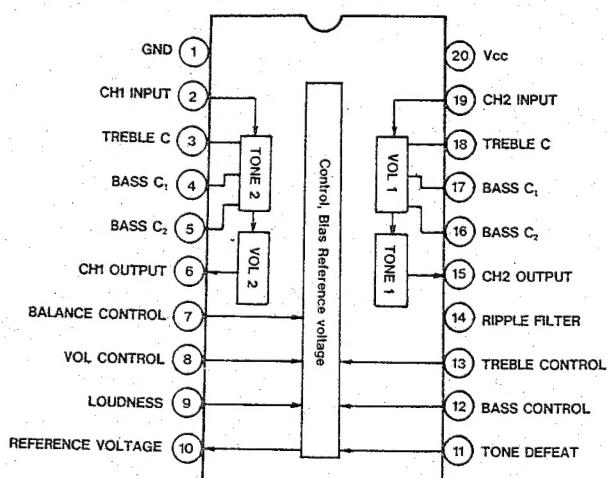
Features

The selection and control of each volume can be optionally performed by the input of the specified serial data from the outside.

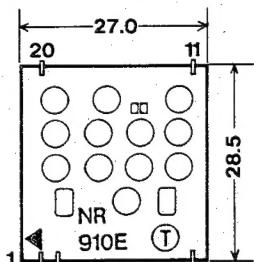
Volume 0 ~ -80dB

Tone Bass ($\pm 15\text{dB}$ f=50Hz~1kHz)
Treble ($\pm 15\text{dB}$ f=1~15kHz)

Block Diagram



Outward Form



TOP VIEW

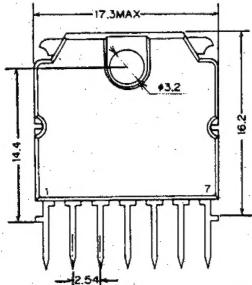
Maximum Rating

Maximum supply voltage	V _{cc} max	16V
Power dissipation	P _d max	800mW

Terminal Connections

CH1 {	NR IN	1	20	M/N
	EQ OUT	2	19	NC
CURRENT	3	18	NR REF	
CH1 {	R	4	17	GND
	F	5	16	CH1 } NR OUT
CH2 {	F	6	15	CH2 }
	R	7	14	NC
GND	8	13	12	V _{cc}
CH2 {	EQ OUT	9	11	NR ON/OFF(H : OFF, L : ON)
	NR IN	10		FWD/REV(H : FWD, L : REV)

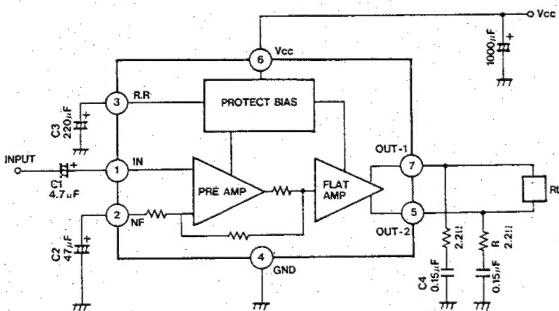
Outward Form



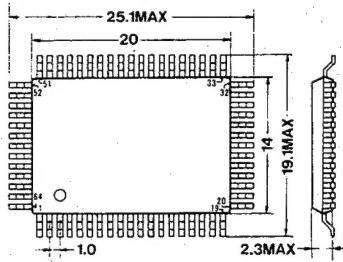
Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Peak Supply Voltage (0.2sec)	V _{cc} _{sures}	50	V
DC Supply Voltage	V _{cc} _{dc}	25	V
Operating Supply Voltage	V _{cc} _{opr}	18	V
Output Current (peak)	I _o _{peak}	4.5	A
Power Dissipation	P _d	15	W

Block Diagram and Test Circuit



I Outward Form



II Outline

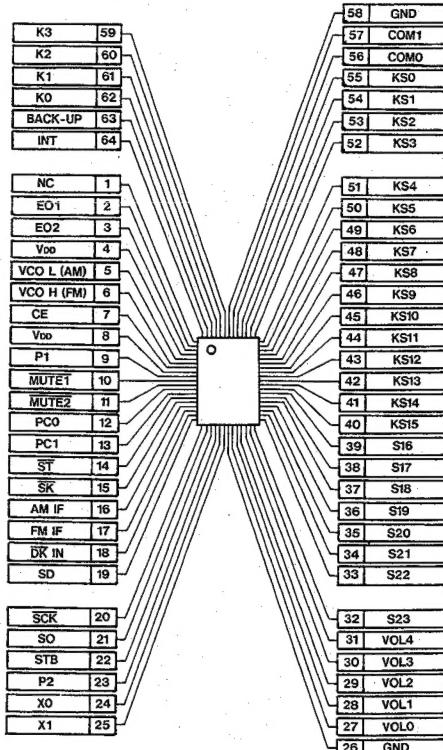
μPD1719G-584-12 is a 4-bit CMOS microprocessor for digital tuning, developed for UKW/MW/LW car radio used in Europe. It incorporates a prescaler operable up to 200MHz, a PLL frequency synthesizer and an LCD driver (1/2 duty, 1/2 bias) into one chip.

○EUROPE BAND or USA BAND is selectable.

○Electronic Volume Control Function (A pulse switch and a seesaw switch can be commonly used). (The initial value of the volume can be changed by ±3 steps.)

○VF Function.

III Terminal Connection



IV Terminal Description

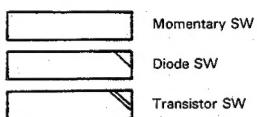
No.	Symbol	Terminal Name	Function
1	N.C	—	Not in use.
2 3	EO1 EO2	Error Out	Error output terminals for PLL. If the local oscillation frequency (VCO output) is divided and the resulting value is higher than the reference frequency, H is output from these terminals. If the two frequencies are the same, the floating condition occurs. Because the same waveform is output from EO1 and EO2, you can select which terminal to use.
4 8	V _{dd}	Power Input	Power input terminal. Provides an operation voltage of 5V±10%. Power can be provided either to pin 4 and pin 8.
5	VCOL (AM)	AM VCO Input	Input terminal from AM station.
6	VCOH (FM)	FM VCO Input	Input terminal from FM station.
7	CE	Chip Enable	Input terminal for mode select signal. When the CE terminal is switched to Low level, the backup mode is switched on, and backup at low power consumption is available (max. 10μA).
9	P1	Power ON 1	When the POWER ON Key is pressed, High level is output from this port.

No.	Symbol	Terminal Name	Function																																																																					
10	MUTE1	Mute signal Output	During tuning operation in RADIO mode, a muting signal is output. (Active Low)																																																																					
11	MUTE2	Volume mute	Low is output only when all the outputs of VOL0 to VOL4 become High. (Active Low)																																																																					
12	PC0	Pulse SW	Key input in pulse switching.																																																																					
13	PC1	Key input	Pull down when not in use.																																																																					
14	ST	ST signal Input	ST station detecting port. Pull up by connecting to MPX IC ST indicator terminal. (Active Low) This is valid only at UKW. (The indicator goes off when outputting MUTE.) ST is displayed on LCD on detecting ST signal.																																																																					
15	SK	SK signal Input	SK station detecting port. Pull up by connecting to SK terminal. (Active Low) This is valid at UKW and SK is displayed on LCD on detecting SK=Low. (The indicator goes off when outputting MUTE signal.)																																																																					
16	AM IF	AM IF Input	AM IF input terminal (459kHz). This is valid only at AM.																																																																					
17	FM IF	FM IF Input	FM IF input terminal (10.7MHz). This is valid only at FM.																																																																					
18	DK IN	DK signal Input	DK signal input port. Pull up by connecting to DK terminal on SDK circuit. (Active Low) This is valid except for LW and MW.																																																																					
19	SD	SD signal Input	Station detecting port in execution of AUTO TUNING and execution stops with SD=IF COUNT=1. In VF mode, it stops with SD=IF COUNT=SK=1. Pull up by connecting to each SD terminal of UKW and MW/LW. (Active High)																																																																					
20	SCK	Clock signal Output	Clock signal output terminal.																																																																					
21	SO	Serial data signal Output	Serial data signal output terminal.																																																																					
22	STB	Strobe signal Output	Strobe signal output terminal.																																																																					
23	P2	Power ON (II)	When the POWER ON Key is pressed, High with 0.5 sec. delay than POWER ON (I) is output and MUTE signal is turned OFF after 1.5 sec.																																																																					
24	XO	X'tal	Connection terminals for the quartz oscillator. Connect 4.5MHz quartz.																																																																					
25	XI																																																																							
26	GND	Ground	Ground.																																																																					
27	VOL0	VR control signal Output	Electronic volume control signal output terminals. The signal consists of 5 bits; VOL0 to VOL4, and 32-position volume step is formed. When VOL becomes MIN state, (AF MUTE) PB3 also becomes Low level.																																																																					
28	VOL1		<table border="1"> <thead> <tr> <th>STEP</th> <th>VOL OUT 0</th> <th>VOL 1</th> <th>VOL 2</th> <th>VOL 3</th> <th>VOL 4</th> <th></th> </tr> </thead> <tbody> <tr> <td>31</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>MIN</td> </tr> <tr> <td>30</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>29</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>28</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>20</td> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>Initial value</td> </tr> <tr> <td>18</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>MAX</td> </tr> </tbody> </table>	STEP	VOL OUT 0	VOL 1	VOL 2	VOL 3	VOL 4		31	1	1	1	1	1	MIN	30	1	1	1	1	0		29	1	1	1	0	1		28							20	1	0	1	0	0	Initial value	18							2	0	0	0	1	0		1	0	0	0	0	1		0	0	0	0	0	0
STEP	VOL OUT 0	VOL 1	VOL 2	VOL 3	VOL 4																																																																			
31	1	1	1	1	1	MIN																																																																		
30	1	1	1	1	0																																																																			
29	1	1	1	0	1																																																																			
28																																																																								
20	1	0	1	0	0	Initial value																																																																		
18																																																																								
2	0	0	0	1	0																																																																			
1	0	0	0	0	1																																																																			
0	0	0	0	0	0	MAX																																																																		
29	S23	Segment signal output terminals to LCD. The display uses the matrix of COM0 and COM1 (Pins #56 and #57).																																																																						
30	S16	The terminals S10/KS10 through S1/KS1 are also used as a key return signal source of key matrix.																																																																						
40	S/KS15	The display data and the key source signal are output by time-sharing method.																																																																						
55	S/KS0																																																																							
56	COM0	Common signal Output of LCD	Common signal output terminals to LCD panel. The display uses the matrix with S0 to S23.																																																																					
57	COM1																																																																							
59	K3	Key return signal source	4-bit key matrix input terminals. LCD segment terminals (S10/KS10~S0/KS0) are used as key return signal source.																																																																					
62	K0																																																																							
63	BACK-UP	Back up confirmation input	When the voltage on this terminal becomes 3.5V or less, the operation of internal clock generator and CPU is stopped and becomes memory back-up state with low power consumption.																																																																					
64	INT		Interrupt request signal input terminal. The interrupt request is output at the rising edge of the signal applied to this terminal. When Volume Key is connected to this terminal and the volume key is input to this, interrupt request is output. This is to process volume key corresponding to pulse switching in real-time basis.																																																																					

V Key Matrix

§ 1. Key Matrix Connection Table

Output	Input	K3 (Pin 59)	K2 (Pin 60)	K1 (Pin 61)	K0 (Pin 62)
KSO (Pin 55)	LOUD		M3	M2	M1
KS1 (Pin 54)	□		M6	M5	M4
KS2 (Pin 53)	APC	POWER ON/OFF	VOL UP	VOL DOWN	
KS3 (Pin 52)	SEEK UP	MA (SAM)	M UP	VF/ST-ON	
KS4 (Pin 51)	SEEK DOWN	EXM (PSS)	M DOWN	BAND	
KS8 (Pin 47)	MTL	REV	FOR	R/T	
KS9 (Pin 46)		VF/ST-ON SEL			
KS10 (Pin 45)		BAND			



§ 2. Diode SW

Symbol	Function						
VF/ST-ON SEL.	A switch to determine whether VF is enabled or switching of ST/MONO can be done by SW.						
	<table border="1"> <tr> <td></td><td>VF/ST-ON SEL</td></tr> <tr> <td>VF</td><td>0</td></tr> <tr> <td>ST-ON</td><td>1</td></tr> </table>		VF/ST-ON SEL	VF	0	ST-ON	1
	VF/ST-ON SEL						
VF	0						
ST-ON	1						
BAND	A switch to determine the area to be used.						
	<table border="1"> <tr> <td></td><td>BAND</td></tr> <tr> <td>Europe</td><td>0</td></tr> <tr> <td>U.S.A</td><td>1</td></tr> </table>		BAND	Europe	0	U.S.A	1
	BAND						
Europe	0						
U.S.A	1						

§ 3. Transistor SW

Symbol	Function						
MTL	A switch valid only at TAPE. "MTL" is displayed on LCD by shortcircuiting the switch.						
REV	A switch valid only at TAPE. REV "△" is displayed on LCD by shortcircuiting the switch.						
FOR	A switch valid only at TAPE. FOR "▷" is displayed on LCD by shortcircuiting the switch.						
R/T	A switch to determine display switching of RADIO and TAPE, status of each I/O port and enabling of momentary switch. 1) When BAND (diode switch) is EUROPE, a) In RADIO All the I/O ports are in normal operation status, the transistor switches (MTL, FOR, REV) on the key matrix and switches associated with TAPE are disabled and no display is on LCD. b) In TAPE All the functions in RADIO operate normally but MUTE signal will not be output (even if RADIO KEY is operated). In addition, the transistor switches (MTL, FOR, REV) on the key matrix and switches associated with TAPE are enabled and display is on LCD. When DK signal is input in TAPE, the mode will be forcibly switched to RADIO and displays associated with TAPE will disappear. 2) When BAND (diode switch) is USA, a) In RADIO The following I/O ports are effective at this time: IC pins #2 to 14, 19 to 35, 37 to 38, 40 to 57 and 58 to 64. The keys VF/ST-ON SEL and VF/ST-ON are disabled on the key matrix. b) In TAPE The effective I/O ports are: IC pins #9 to 13, 20 to 26, 35 and 53 to 64. The following keys are effective on the key matrix: POWER ON, VOL-UP, DOWN, LOUD, R/T, MTL, FOR, REV, APC and □. In TAPE, displays on LCD are Running, LOUD, APC, □ and MTL.						
	<table border="1"> <tr> <td></td><td>R/T</td></tr> <tr> <td>RADIO</td><td>1</td></tr> <tr> <td>TAPE</td><td>0</td></tr> </table>		R/T	RADIO	1	TAPE	0
	R/T						
RADIO	1						
TAPE	0						

§ 4. Momentary SW

Symbol	Function									
LOUD	A key for switching loudness ON/OFF. Loudness ON/OFF is switched on each press of this key. The initial status is OFF. In loudness ON, "LOUD" is displayed on LCD. This key is enabled both in RADIO and in TAPE. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <th>Key status</th><th>Output port</th><th>Display</th></tr> <tr> <td>ON</td><td>HIGH</td><td>ON</td></tr> <tr> <td>OFF</td><td>LOW</td><td>OFF</td></tr> </table>	Key status	Output port	Display	ON	HIGH	ON	OFF	LOW	OFF
Key status	Output port	Display								
ON	HIGH	ON								
OFF	LOW	OFF								
M1 M6	Keys for preset tuning and writing to preset. UKW/MW/LW can be independently stored for one key and UKW 6CH/SAM 6CH/MW 6CH/LW 6CH, total of 24 stations can be stored in EUROPE BAND. In USA BAND, they are: FM1 6CH/FM2 6CH/MW 6CH, total of 18 stations. When the keys M1 to M6 is pressed, Low level is output from MUTE (Pin #20) and the preset memory standby status is on. When the key is released within 1.5 seconds, the preset tuning is on and the stored frequency corresponding to the key pressed is called. When this is pressed for 1.5 seconds or longer, the current frequency is stored to the preset memory corresponding to the key pressed and MUTE is released. During preset tuning or after memory write, the channel number preset is displayed on LCD. During MUTE output, ST and SK displays disappear.									
□□	A switch valid only at TAPE. "□□" is displayed on LCD by shortcircuiting the switch.									
APC	A switch valid only at TAPE. "APC" is displayed on LCD by shortcircuiting the switch.									
POWER ON/OFF	A key to turn ON/OFF the power of the set.									
VOL UP VOL DOWN	Keys to turn UP/DOWN the electronic volume. When the see-saw pulse is also used, the pulse correspondence is enabled and when the pulse volume is used, the see-saw is disabled. I) In pulse correspondence Input of one pulse to VOL-UP causes one step-up operation of the volume control of the output ports VOL0 to VOL4 to the MAX direction. Input of one pulse to VOL-DOWN causes one step-down operation of the volume control to the MIN direction. These keys are enabled when the power is on (normal operation) but they are disabled during auto-tuning. II) In see-saw switch correspondence In case of see-saw switch, when the VOL-UP/DOWN key is ON for 0.5 second or less, the step goes up/down by one and when the key is ON for 0.5 second or longer, the step goes up/down rapidly at the rate of 250ms/step. As in the case of pulse switch, the see-saw switch is enabled when the power is on (normal operation) but it is disabled during auto-tuning. In addition, when both the pulse and the see-saw switches are used, the pulse switch has a priority.									
SEEK UP SEEK DOWN	Keys for auto-tuning and the stations are sought to the UP/DOWN direction. When the station is found, the frequency is retained. Each step up or down (UKW [50kHz], MW [9kHz], LW [1kHz]) causes SD and IF count detection. When this key is pressed, search is made to the UP or DOWN direction in LOCAL mode for the first cycle, then in DX mode for the second cycle. When no station is found after the second cycle, it is searched for two more cycles and completes SEEK operation. (The operation ends by calling the first frequency.) In addition, when the same key is pressed again during search in LOCAL mode, the frequency returns to the first one and search starts in DX. At this time, the SEEK ends after one cycle from the point of changing to DX and if no station is received, the first frequency is called. At this time, as the frequency changes greatly, like the case in the upper-limit frequency ↔ the lower-limit frequency, WAIT of 250ms ~ 375 ms is established after outputting N-value (division ratio) and before detecting SD. During DX, "DX" is displayed on LCD. On the contrary, in the search mode for traffic information station, when "1" is input to both SD and SK signals, the search stops at the frequency of that station. In normal search, only SD signal input "1" stops the search. When the search stops during DX search, "DX" display disappears and in reception mode, including the case of stopping during LOCAL search, the mode becomes DX forcibly.									

Symbol	Function																								
MA (SAM)	When the key is pressed for 2 seconds or longer, the stations are sought automatically and they are stored in M1 to M6. (FM1, FM2 and AM are enabled in USA.) In EUROPE, it is enabled only in UKW and when it is pressed for 2 seconds or longer, the frequencies are stored in M1 to M6 of S.M. (secondary memory) of UKW and when the key is released within 2 seconds, S.M. of UKW is called. (1) Calling When the SAM key is released within 2 seconds, the Secondary Memory (hereinafter called S.M.) is called and "SAM" is displayed on LCD. When the preset key is pressed at that time, the stations stored in S.M. can be called and when the SAM key is pressed and released again within 2 seconds, the frequency returns to the one in the primary memory immediately before pressing the SAM key. The last channel in S.M. is kept. (2) Writing Regardless of SAM mode, when the SAM key is pressed for 2 seconds or longer, "SAM" is displayed on LCD and seek-up operation is started (as in SEEK UP, the first cycle is in LOCAL and the second in DX). When the stations are found, they are stored sequentially from CH1 to CH6 automatically. Auto memory function is turned off after completion of the second cycle. When storing up to CH6 is completed within two cycles, CH1 is called and operation is stopped. When the SAM key is pressed again within two cycles, CH1 is called if even one station is stored until then and the starting frequency is called if no station is stored. When no station is stored after two cycles, the starting frequency is called and operation is stopped. In DX seek (the second cycle), the frequencies stored in LOCAL seek (the first cycle) are skipped. When USA BAND is selected by diode key, the signal becomes AS and it is enabled in FM1, FM2 and AM. The difference between this and SAM is that instead of automatic storage in S.M., the primary memory is over-written. No display is on LCD and the key is disabled even if the key is pressed and released within 2 seconds.																								
M UP M DOWN	A key for UP/DOWN of frequency on each band. Each press causes one step-up or step-down operation of frequency. When the key is pressed for 0.5 second or longer, the fast forward operation is performed with the following time interval until the key is released. ○ U.S.A. ○ EUROPE In FM Approx. 20ms In UKW Approx. 20ms In AM Approx. 70ms In MW Approx. 70ms In LW Approx. 70ms When the M UP Key is pressed at the upper-limit frequency, the frequency jumps to the lower limit and when the M DOWN Key is pressed at the lower-limit frequency, it jumps to the upper-limit.																								
VF/ST-ON	When VF is selected by initial diode, this becomes VF key and the traffic information station is searched and received. When no such station is found, SEEK UP operation always continues. When ST-ON is selected, this becomes ST/MONO switching key and ON ↔ OFF is switched in toggling manner.																								
EXM (P.S.S)	When this key is pressed, the stations stored in M1 to M6 are scanned and if any of these stations broadcasts, the scan stops for 5 seconds and starts again after 5 seconds. In EUROPE, 6 stations in UKW, S.M., MW or LW are scanned. In USA, 12 stations in FM1 or FM2, or 6 stations in AM are scanned.																								
BAND	A key to change receiving band. Each press of this key changes a band to be received in the following order. UKW → MW → LW cyclically changed In addition, every time the band is changed, the band change signal changes in the following way. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <th></th><th>BAND 1</th><th>BAND 2</th></tr> <tr> <td>UKW</td><td>1</td><td>1</td></tr> <tr> <td>MW</td><td>0</td><td>1</td></tr> <tr> <td>LW</td><td>0</td><td>0</td></tr> </table> In U.S.A BAND. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <th></th><th>BAND 1</th><th>BAND 2</th></tr> <tr> <td>FM1</td><td>0</td><td>1</td></tr> <tr> <td>FM2</td><td>0</td><td>1</td></tr> <tr> <td>AM</td><td>0</td><td>0</td></tr> </table>		BAND 1	BAND 2	UKW	1	1	MW	0	1	LW	0	0		BAND 1	BAND 2	FM1	0	1	FM2	0	1	AM	0	0
	BAND 1	BAND 2																							
UKW	1	1																							
MW	0	1																							
LW	0	0																							
	BAND 1	BAND 2																							
FM1	0	1																							
FM2	0	1																							
AM	0	0																							

PARTS LIST:

◎Electrical section

◎MAIN P.W.B

REF.NO.	PART NO.	DESCRIPTION	Q'TY
D214	001-0162-00	Diode AW01-30	1
D136	001-0188-01	Diode 1S1885A	1
101~105 111~119 122~124 D127,130,132 202,204 207~213 401 404~406	001-0330-00	Diode 1SS119	33
D407	001-0377-30	Diode MA4051H	1
D301	001-0377-28	Diode MA4051L	1
D135	001-0377-32	Diode MA4056M	1
D113	001-0377-36	Diode MA4062H	1
D131	001-0377-39	Diode MA4068H	1
D134,137,501	001-0379-00	Diode S5566G	3
D203	001-0423-15	Diode MA4039	1
D126,129,201	001-0423-19	Diode MA4056	3
D106~109	001-0423-20	Diode MA4062	4
D125	001-0423-23	Diode MA4082	1
D120,121	001-0423-24	Diode MA4091	2
D403	001-0451-00	Diode DCD015	1
D215	001-0464-00	Diode 1GWJ42	1
TH301	002-0200-00	Thermistor 10kΩ	1
IFT303,304	005-0976-00	IF-transformer	2
IFT301,302	005-0979-00	IF-transformer	2
L302	010-2046-02	Coil	1
L301	010-2046-17	Coil 5.6μH	1
L101,201	010-2046-33	Coil 120μH	2
VR301,302	012-3808-00	Variable resistor 330Ω	2
VR303	012-3808-06	Variable resistor 10kΩ	1
VR304	012-3808-11	Variable resistor 220kΩ	1
VR601	012-4318-06	Variable resistor 10kΩ	1
VR401,402	012-4318-09	Variable resistor 47kΩ	2
RY101	014-0522-00	Relay	1
C608	042-0249-00	Electrolytic capacitor 16V0.22μF TAN	1
C110	042-0358-00	Electrolytic capacitor 10V1000μF	1
CCT201	050-0077-02	Component circuit 10kΩx4	1
CCT401	050-0077-05	Component circuit	1
CCT202	050-0086-00	Component circuit 10kΩx8	1
CCT601	050-0103-00	Component circuit	1
CCT101	050-0115-00	Component circuit	1
IC402	051-0267-00	IC TC4066BP	1
IC405	051-0267-55	IC μPD4066BG	1
IC406	051-0350-55	IC NJM4558	1
IC201	051-0390-05	IC TD62104F	1
IC602	051-0501-00	IC LA3365	1
IC302	051-0541-00	IC μPC1266G	1
IC403	051-0561-01	IC AN6263	1
IC601	051-0739-00	IC LA2220	1
IC202	051-0740-01	IC TMP42C70N	1
IC301,303	051-0798-21	IC TA7411AP	2
IC102	051-0828-05	IC TC9174F	1

REF.NO.	PART NO.	DESCRIPTION	Q'TY
IC203	051-0829-04	IC TD62305AF	1
IC103	051-0840-16	IC MN1280S	1
IC404	051-0888-00	IC TA7764P	1
IC401	051-0889-00	IC NR910E	1
IC101	051-1155-01	IC μPD1719G-584-12	1
X201	060-0067-52	Ceramic resonator 500Hz	1
CR601	060-0115-01	Ceramic resonator	1
SUP301,302	060-0122-10	Surge protector	2
X101	061-1064-00	Crystal 4.5MHz	1
101~108 Q112,124,136 202,601	100-1048-00	Transistor 2SA1048	13
Q142	100-1307-00	Transistor 2SA1307	1
Q203,212	100-1346-00	Transistor 2SA1346	2
Q208	101-0909-00	Transistor 2SB909M	1
Q110,114,129 210	101-1237-00	Transistor 2SB1237	4
Q140	102-1846-00	Transistor 2SC1846	1
123,133,134 Q137~139 Q205,209,211 213,266,501	102-2458-00	Transistor 2SC2458	12
109,111,113 Q115~119 Q126,128,143 301,404,405	102-2458-51	Transistor 2SC2458GR	14
Q120,135,204 206,207,408	102-3400-00	Transistor 2SC3400	6
141,302,303 Q401~403 406,407	103-1450-00	Transistor 2SD1450	8
Q121,122,130 131,201,132	103-1858-00	Transistor 2SD1858	6
Q125,127	108-0161-25	FET 2SK161	2
C314,345	160-5612-05	Ceramic capacitor 560pF B HD	2
C325	160-3322-05	Ceramic capacitor 3300pF B HD	1
C112	171-1022-06	Ceramic capacitor 1000pF SC	1
106,107,113 120,125 C305~307,312 322,324,327 337~339 426	171-1032-06	Ceramic capacitor 0.01μF SC	16
C304,319,320 422,423	171-1532-06	Ceramic capacitor 0.015μF SC	5
C104,302,330 331,335	171-2232-06	Ceramic capacitor 0.022μF SC	5
C308,332,333 341	171-4722-06	Ceramic capacitor 4700pF SC	4
C310,343,421 603	171-4732-06	Ceramic capacitor 0.047μF SC	4
C410,416	171-8222-06	Ceramic capacitor 8200pF SC	2
C124	172-1042-20	Polyester capacitor 0.1μF SS	1
C610	172-2242-20	Polyester capacitor 0.22μF SS	1
C406	173-2232-10	Polyester capacitor 0.022μF S	1
C605	173-6831-10	Polyester capacitor 0.068μF S	1
C407	173-6832-10	Polyester capacitor 0.068μF S	1
C309,342,349	174-1000-13	Ceramic capacitor 10pF CH TC	3
C203,204	174-1010-13	Ceramic capacitor 100pF CH TC	2
C301	174-1200-13	Ceramic capacitor 12pF CH TC	1
C101,102	174-2200-13	Ceramic capacitor 22pF CH TC	2
C303	174-6090-13	Ceramic capacitor 6pF CH TC	1
C334,340	179-2273-21	Electrolytic capacitor 10V220μF S	2
C123	179-3373-33	Electrolytic capacitor 16V330μF S	1
C313,344	182-1053-62	Electrolytic capacitor 50V1μF SS	2

REF.NO.	PART NO.	DESCRIPTION	Q'TY	REF.NO.	PART NO.	DESCRIPTION	Q'TY
C425	182-1056-62	Electrolytic capacitor 50V1 μ F NP SS	1	C615	183-1073-12	Electrolytic capacitor 6.3V100 μ F USS	1
C317	182-1063-32	Electrolytic capacitor 16V10 μ F SS	1	C321,323,401	183-2243-62	Electrolytic capacitor 50V0.22 μ F USS	3
C415,602	182-1073-22	Electrolytic capacitor 10V100 μ F SS	2	C202,205	183-2263-12	Electrolytic capacitor 6.3V22 μ F USS	2
C315,346	182-2253-62	Electrolytic capacitor 50V2.2 μ F SS	2	C121	183-2263-32	Electrolytic capacitor 16V22 μ F USS	1
C609	182-2263-22	Electrolytic capacitor 10V22 μ F SS	1	C105,411,417 601	183-3343-62	Electrolytic capacitor 50V0.33 μ F USS	4
C614	182-4763-22	Electrolytic capacitor 10V47 μ F SS	1	C103	183-3353-62	Electrolytic capacitor 50V3.3 μ F USS	1
C336	183-1043-62	Electrolytic capacitor 50V0.1 μ F USS	1	C607	183-4743-62	Electrolytic capacitor 50V0.47 μ F USS	1
111,116,117 118,206,207 C319,328 329,347,419 424,611	183-1053-62	Electrolytic capacitor 50V1 μ F USS	14	C612	183-4753-52	Electrolytic capacitor 35V4.7 μ F USS	1
114,115,119 122,318,326 348,402,403 C404,405,408 409,412,413 414,418,420 604,606,616	183-1063-32	Electrolytic capacitor 16V10 μ F USS	21	C427	183-4763-12	Electrolytic capacitor 6.3V47 μ F USS	1
				C108,109,201 426,613	183-6863-22	Electrolytic capacitor 10V68 μ F USS	5

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REF.NO.	PART NO.	DESCRIPTION	Q'TY	REF.NO.	PART NO.	DESCRIPTION	Q'TY
L 102,103	009-0642-00	Choke	2	IC501~504	051-0735-10	IC TA8201AK	4
C 503,510,516 522	042-0334-15	Electrolytic capacitor 35V4.7 μ F	4	C 504,511,517 523	160-2222-05	Ceramic capacitor 2200pF B HD	4
C 505,512,518 524	042-0334-30	Electrolytic capacitor 6.3V47 μ F	4	C501,502	173-1042-10	Polyester capacitor 0.1 μ F S	2
C 506,513,519 525	042-0373-00	Electrolytic capacitor 6.3V220 μ F	4	508,509,514 C515,520,521 527,528	173-1542-10	Polyester capacitor 0.15 μ F S	8
C507,526	042-0338-00	Electrolytic capacitor 16V2200 μ F	2				

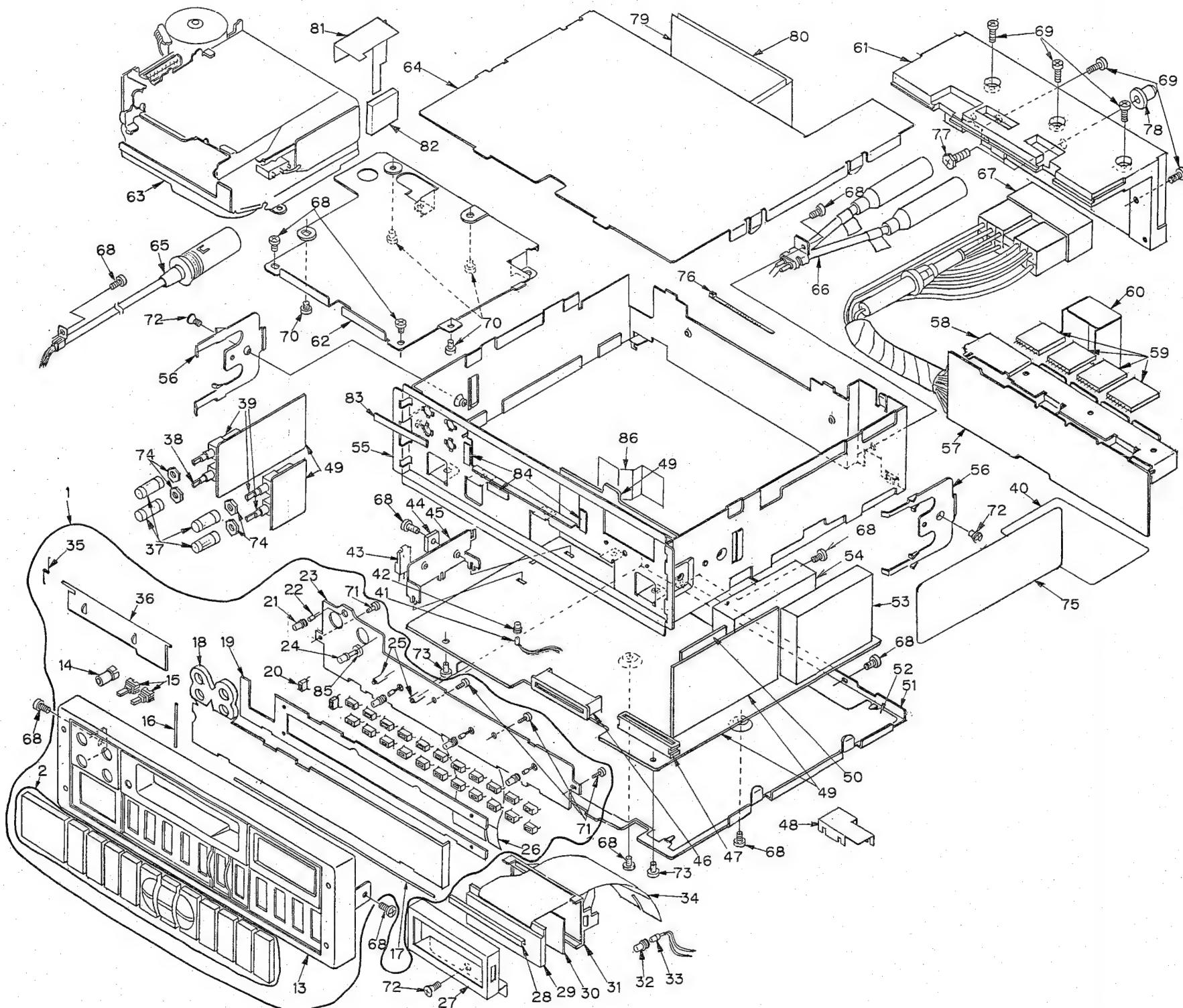
©TAPE MECHANISM ELECTRICAL PARTS

REF.NO.	PART NO.	DESCRIPTION	Q'TY	REF.NO.	PART NO.	DESCRIPTION	Q'TY
D1~4	001-0330-00	Diode 1SS119	4	Q4,5	102-3267-50	Transistor 2SC3267GR,BL	2
Q1	100-1048-00	Transistor 2SA1048	1	R1	114-2291-11	Film resistor 1W2.2 Ω OM	1
Q2,3	100-1297-00	Transistor 2SA1297	2	C1	182-1073-32	Electrolytic capacitor 16V100 μ F SS	1

NOTE : OM (Oxidized Metal) SS (Super Small)
 S (Small) TC (Temperature-Compensating)
 HD (Higher Dielectric) LL (Low Leak)
 SC (Semi-Conductor) USS (Ultra Super Small)

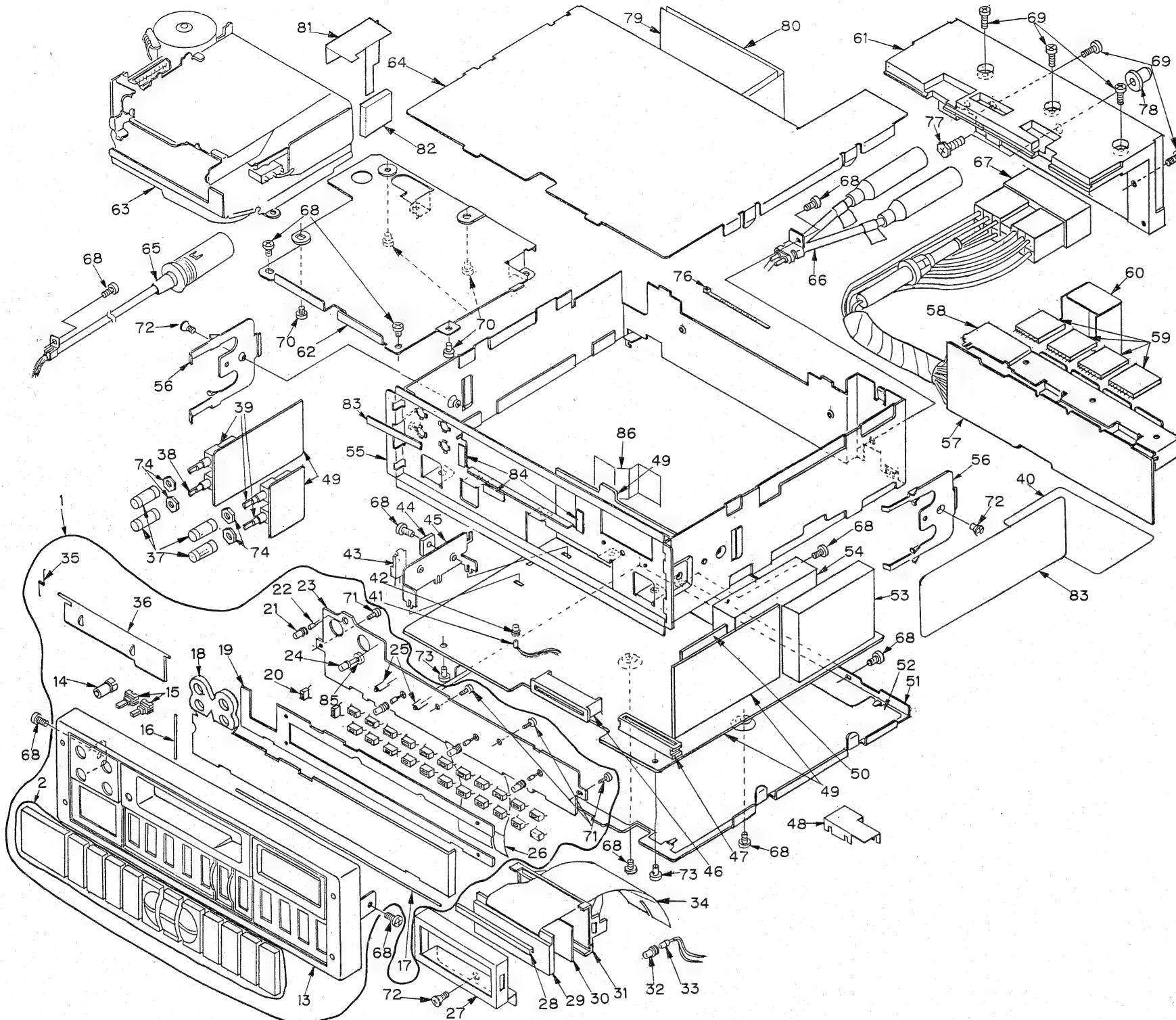
EXPLODED VIEW • PARTS LIST:

©Main section PU-9357A-A



■ EXPLODED VIEW • PARTS LIST:

© Main section PU-9359A-A



REF.NO.	PART NO.	DESCRIPTION	Q'TY
1	940-1076A	Escutcheon ass'y	1
2	947-0184-00	Button ass'y	1
13	370-5088-02	Escutcheon	1
14	335-2974-00	LED accessory	1
15	335-2973-00	LED accessory	2
16	612-0171-00	Shaft	1
17	612-0170-00	Shaft	1
18	335-2975-01	Illumination plate	1
19	345-4885-00	Cushion rubber	1

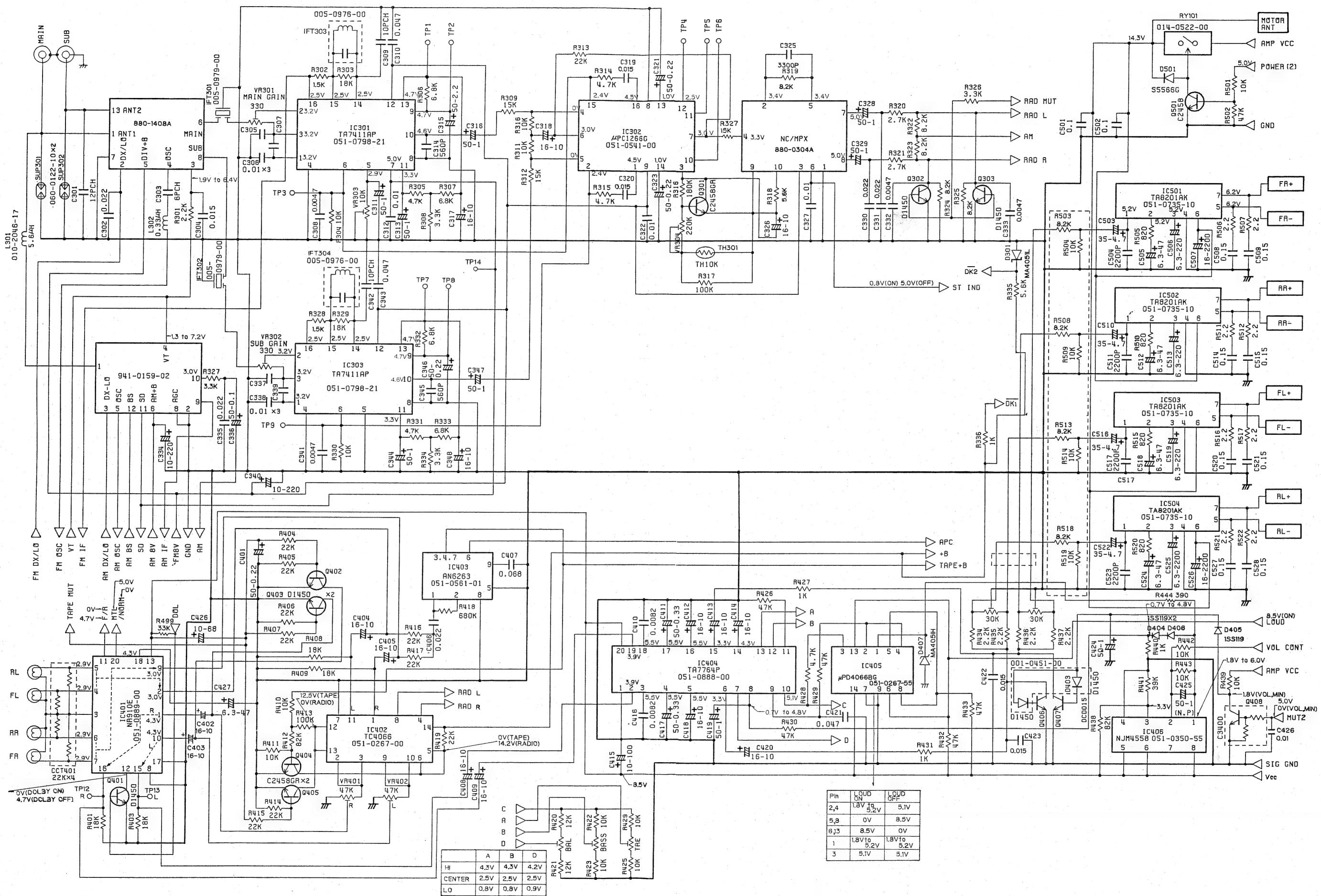
REF.NO.	PART NO.	DESCRIPTION	Q'TY
20	013-3812-01	Switch	24
21	345-3814-29	Lamp rubber	4
22	017-0345-09	Pilot lamp	4
23	099-8456-00	P.W.B (SW)	1
24	001-0369-00	Diode	1
25	001-0486-02	Diode	2
26	099-8458-01	FLEXIBLE P.W.B	1
27	330-9023-00	LCD holder	1
28	321-0961-00	Clamp	1

REF.NO.	PART NO.	DESCRIPTION	Q'TY
29	379-0230-01	Indicator	1
30	335-2977-00	Color filter	1
31	335-2976-01	Reflector	1
32	345-4157-31	Lamp rubber	1
33	017-0346-10	Pilot lamp	1
34	816-1997-00	Heat seal	1
35	750-2309-01	Spring	1
36	320-0391-07	Dustproof cover	1
37	380-5037-02	Knob	4

REF.NO.	PART NO.	DESCRIPTION	Q'TY
38	012-4794-00	Variable resistor	1
39	012-4793-00	Variable resistor	3
40	286-7132-00	Set plate	1
41	017-0345-00	Pilot lamp	1
42	345-3887-11	Lamp rubber	1
43	100-1307-00	Transistor (2SA1307)	1
44	102-1846-00	Transistor (2SC1846)	1
45	330-9025-01	TR support	1
46	074-0731-22	Outlet socket (22P)	1
47	074-0847-28	Outlet socket (28P)	1
48	347-2791-00	P.W.B holder	1
49	099-8455-01	P.W.B (MAIN)	1
50	880-0304A	NC/MPX block	1
51	304-0410-01	Lower cover	1
52	347-2792-01	Insulator	1
53	880-1408A	FM tuner pack	1
54	941-0159-02	AM tuner pack	1
55	312-0313-00	Chassis	1
56	750-2649-00	Spring	2
57	099-8457-00	P.W.B (AUDIO)	1
58	330-9021-00	IC holder	1
59	051-0735-10	IC (TA8201AK)	4
60	330-9024-00	Shield case	1
61	313-1354-00	Heat sink	1
62	330-9022-01	Mechanism holder	1
63	930-0530-20	Tape mechanism	1
64	303-0364-00	Upper cover	1
65	854-0836-00	Extension lead	1
66	092-0631-00	Antenna receptacle	1
67	854-0812-02	Extension lead	1
68	714-3005-81	Machine screw (M3x5)	11
69	714-3010-81	Machine screw (M3x10)	5
70	714-3003-81	Machine screw (M3x3)	4
71	716-0778-00	Wave screw	4
72	731-3006-40	Tap tight (M3x6)	3
73	731-3006-80	Tap tight (M3x6)	2
74	722-0332-00	Nut	4
75	347-1597-00	Label	1
76	335-0833-01	Lead clamp	1
77	710-5025-31	Hexagon bolt	1
78	345-4847-00	Cap	1
79	330-9069-01	Shield plate	1
80	347-2842-00	Insulator	1
81	347-2843-00	Insulator	1
82	345-4138-00	Spacer	1
83	345-4981-00	Cushion rubber	1
84	345-4982-00	Cushion rubber	3
85	345-4983-00	Cushion rubber	1
86	347-2910-00	Insulator	1

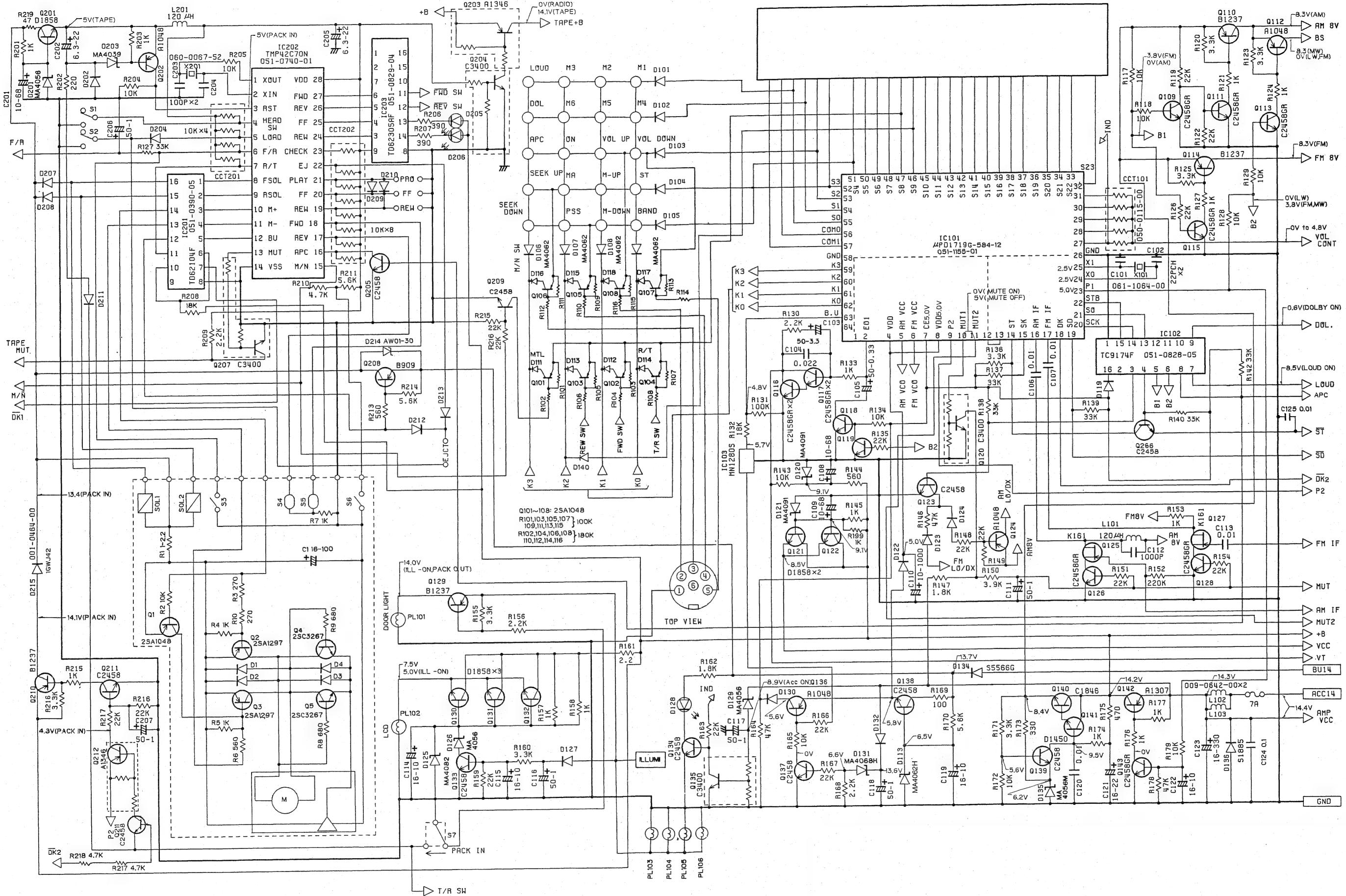
CIRCUIT DIAGRAM: 1/2

©PU-9357A-A



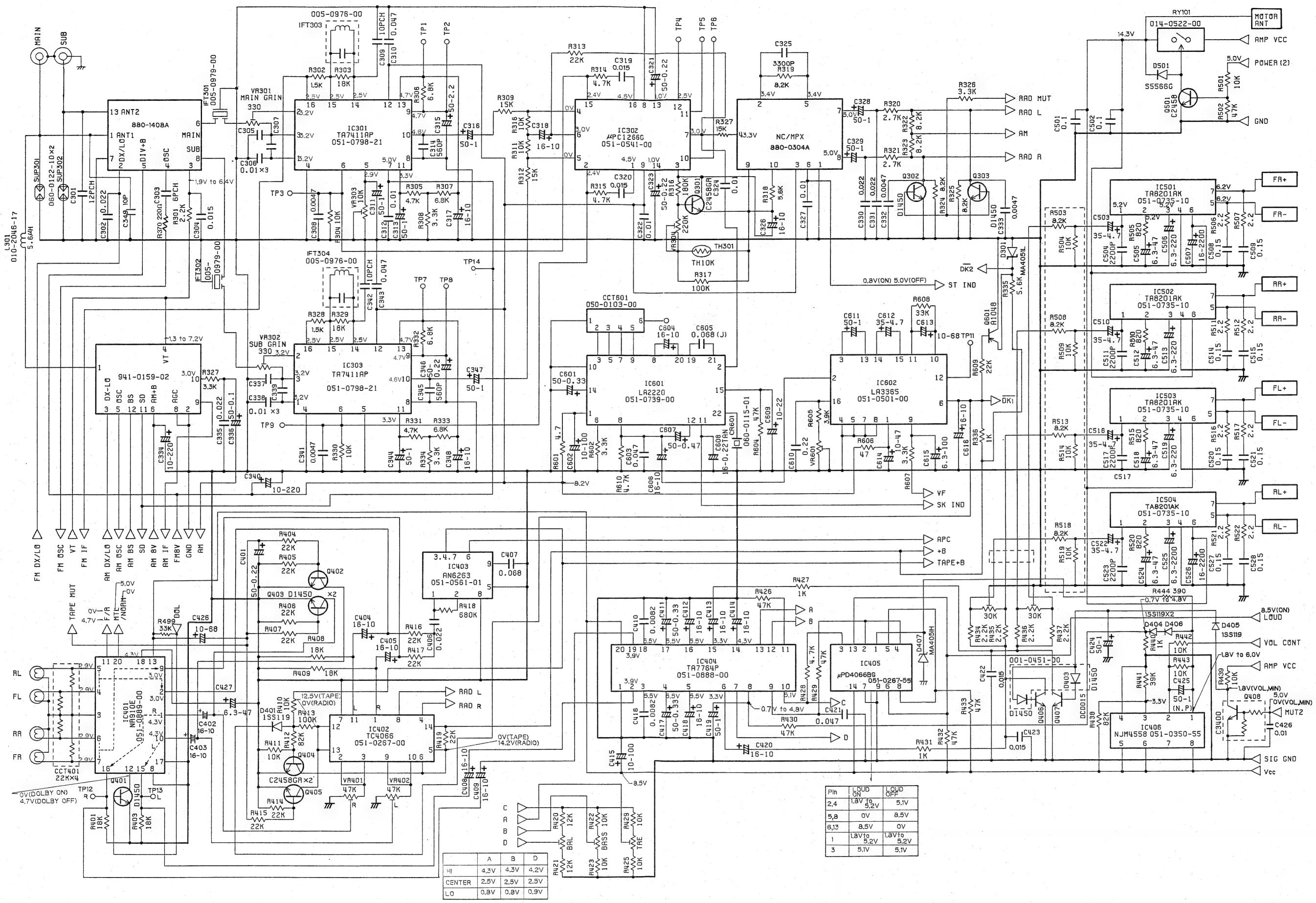
CIRCUIT DIAGRAM: 2/2

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CIRCUIT DIAGRAM: 1/2

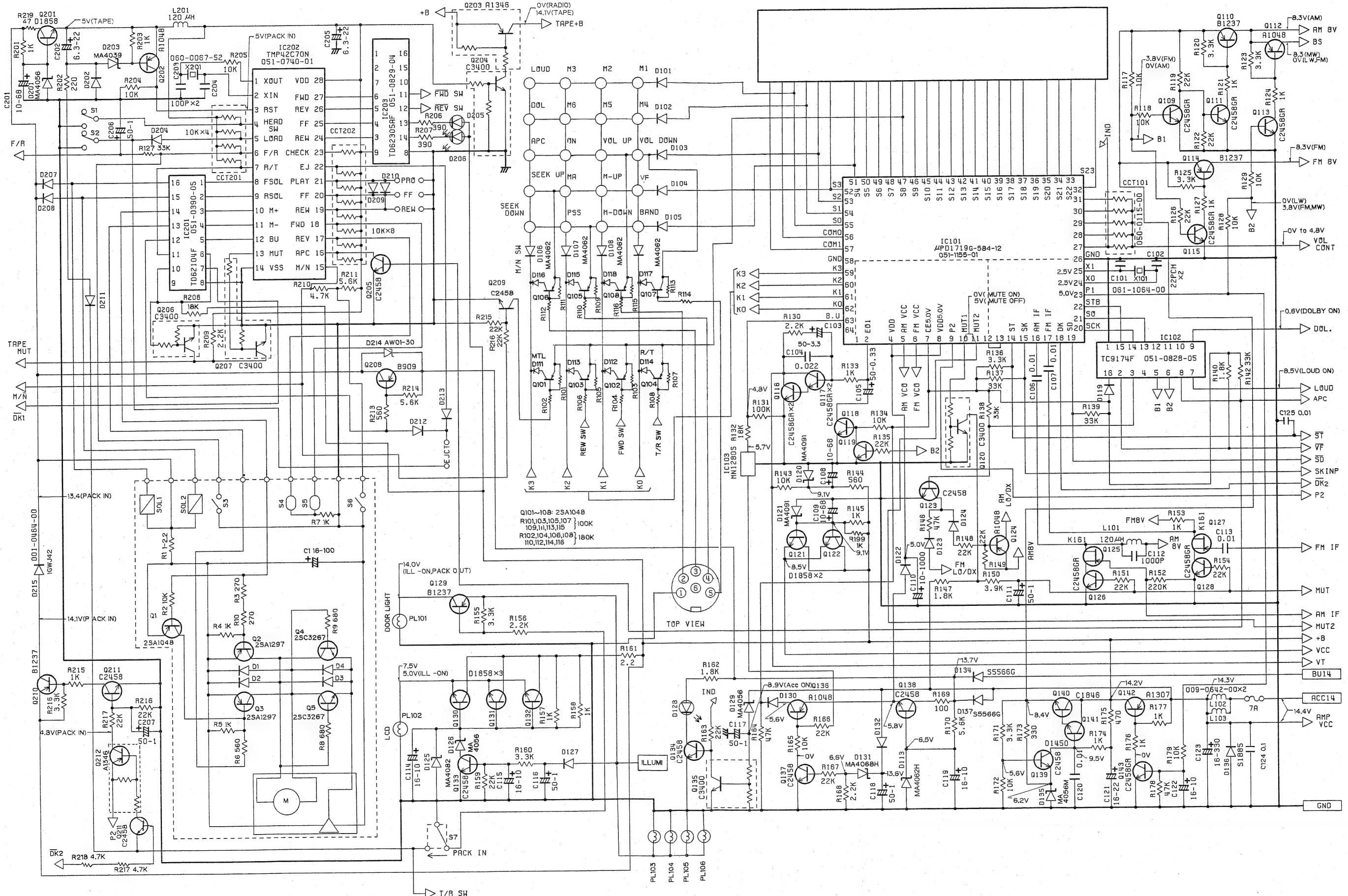
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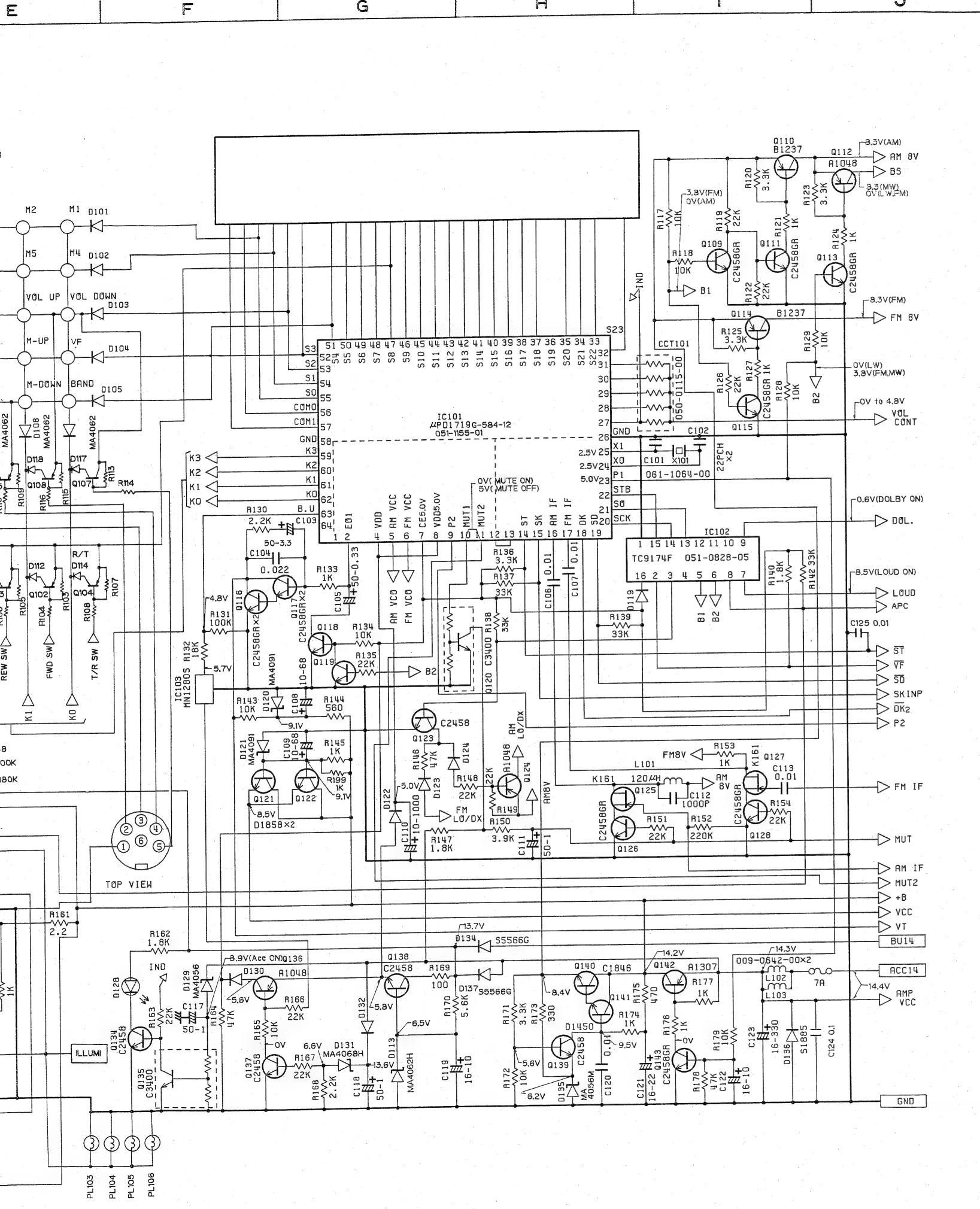


Pin	LOUD ON	LOUD OFF
2,4	1.8V to 5.2V	5.2V
5,8	0V	8.5V
6,13	8.5V	0V
1	1.8V to 5.2V	1.8V to 5.2V
3	5.1V	5.1V

CIRCUIT DIAGRAM: 2/2

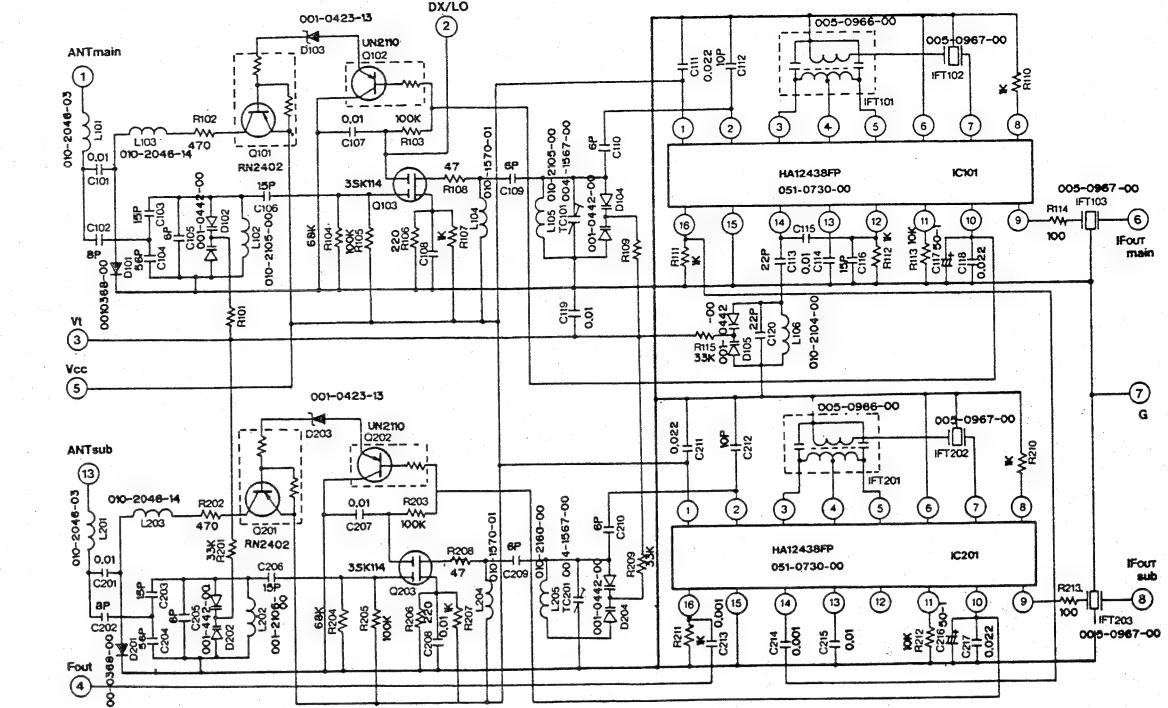
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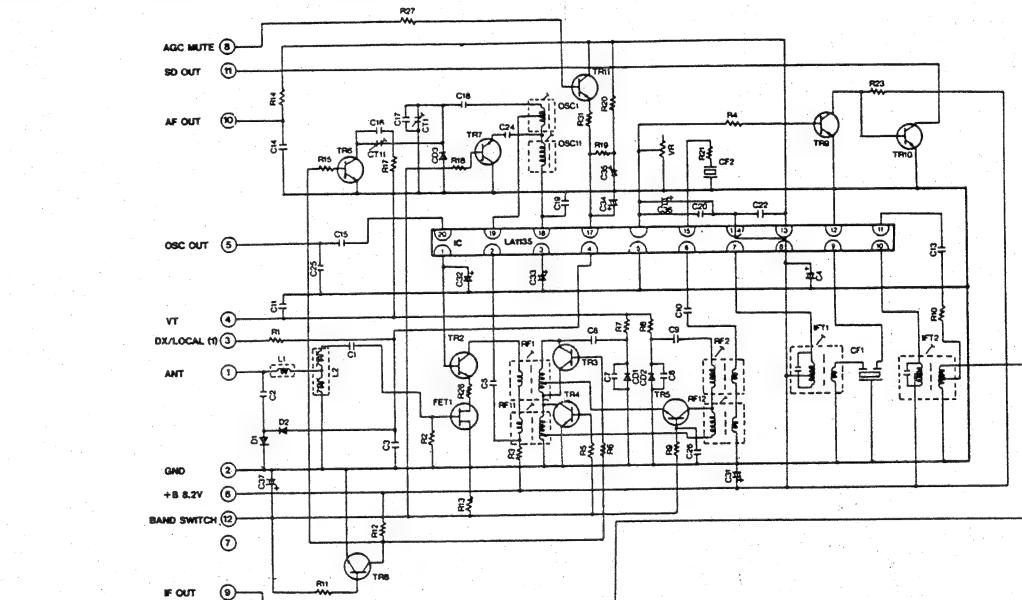


BLOCK CIRCUIT DIAGRAM:

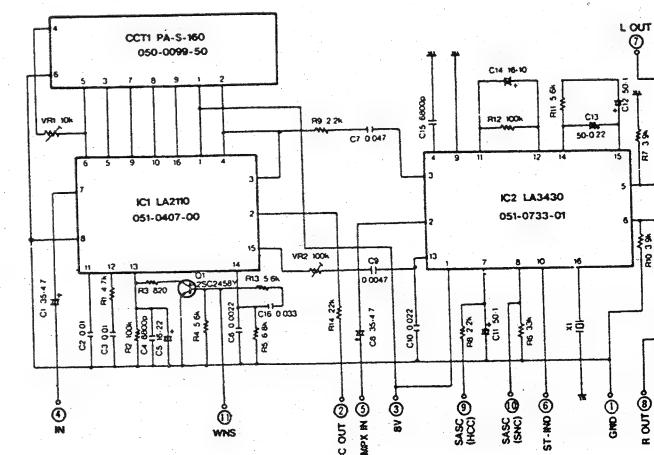
©UKW TUNER PACK: 880-1408A



©MW/LW TUNER PACK: 941-0159-02

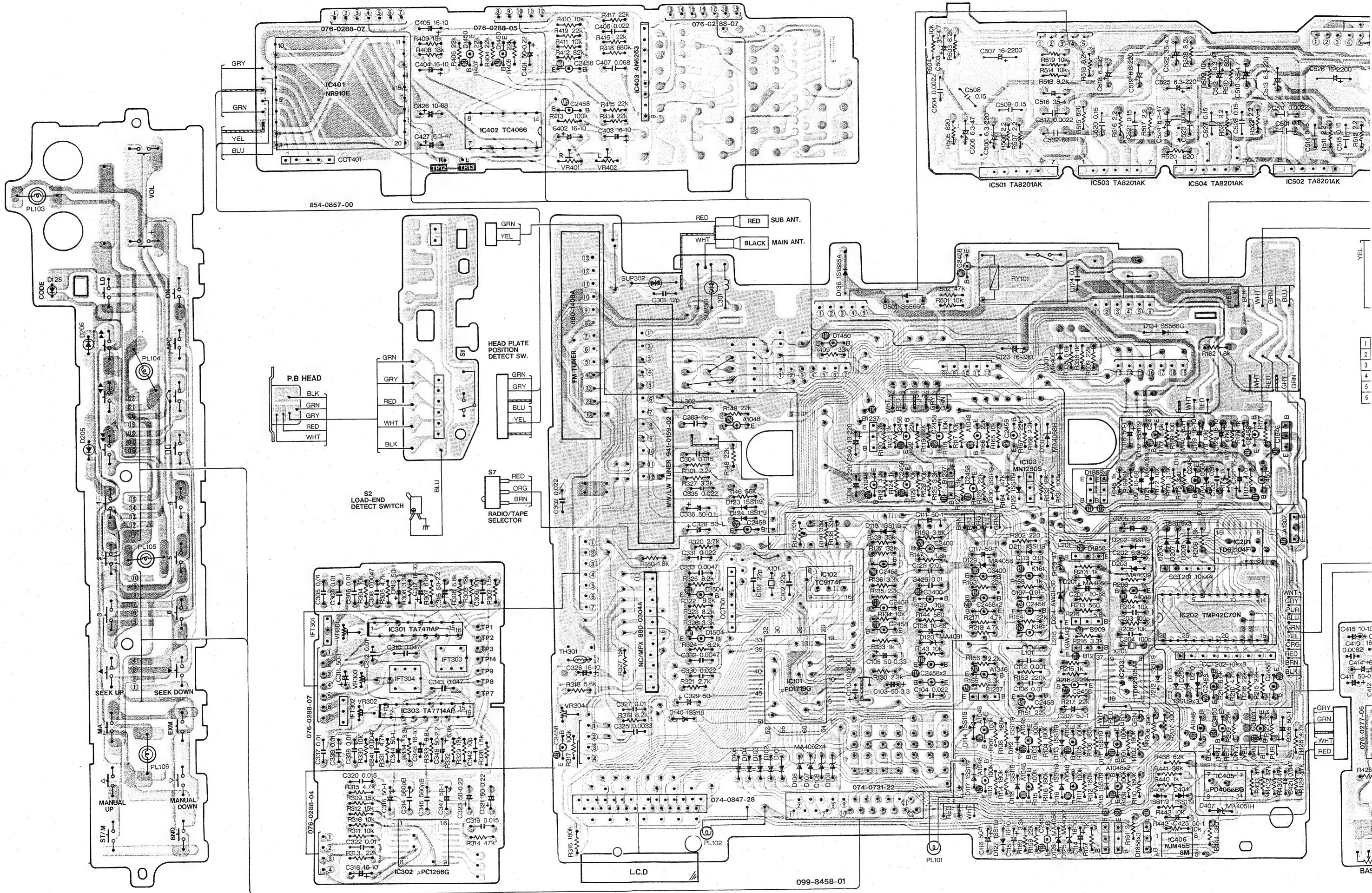


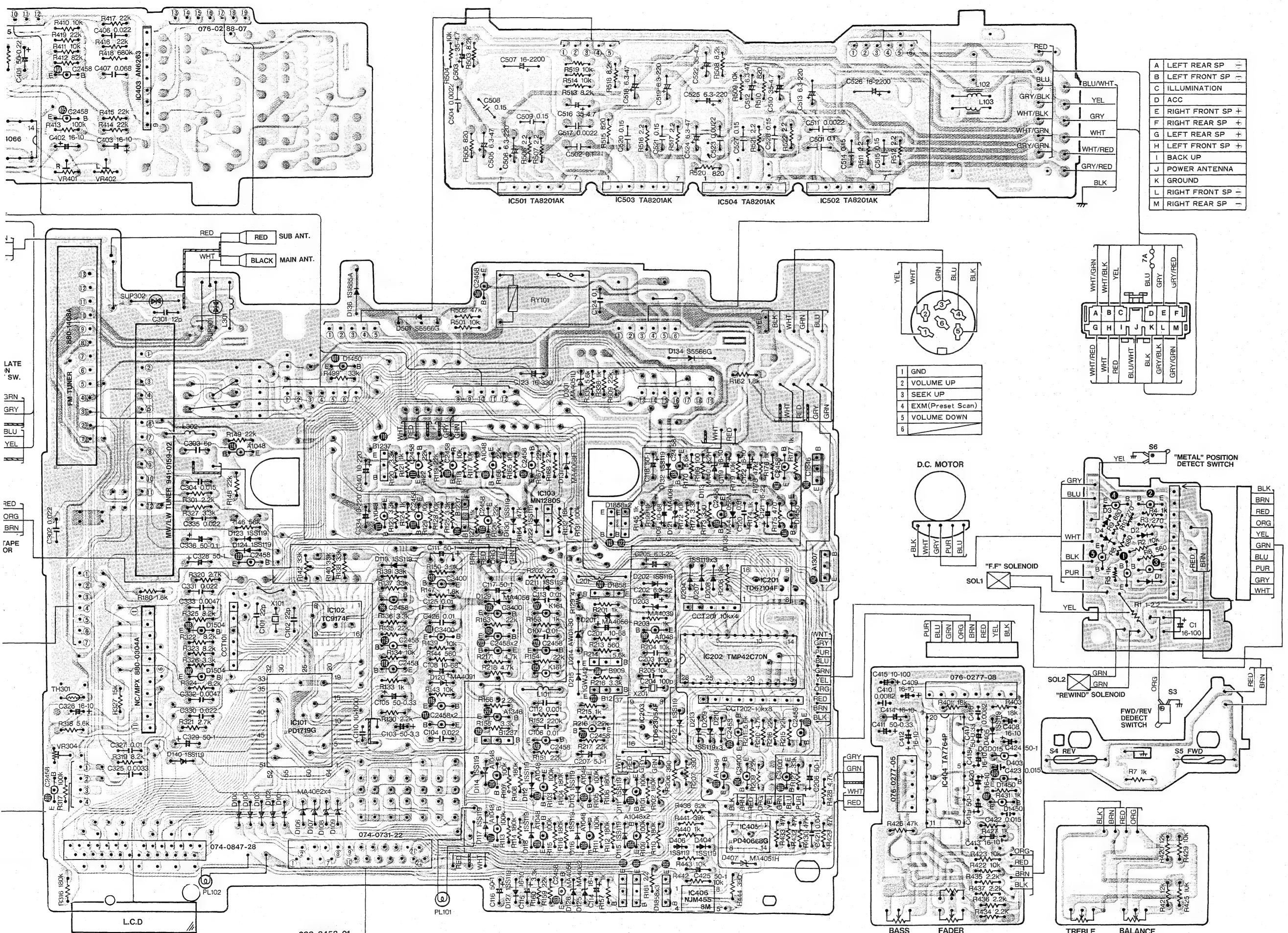
©NC/MPX BLOCK Ass'y: 880-0304A



PRINTED WIRING BOARD:

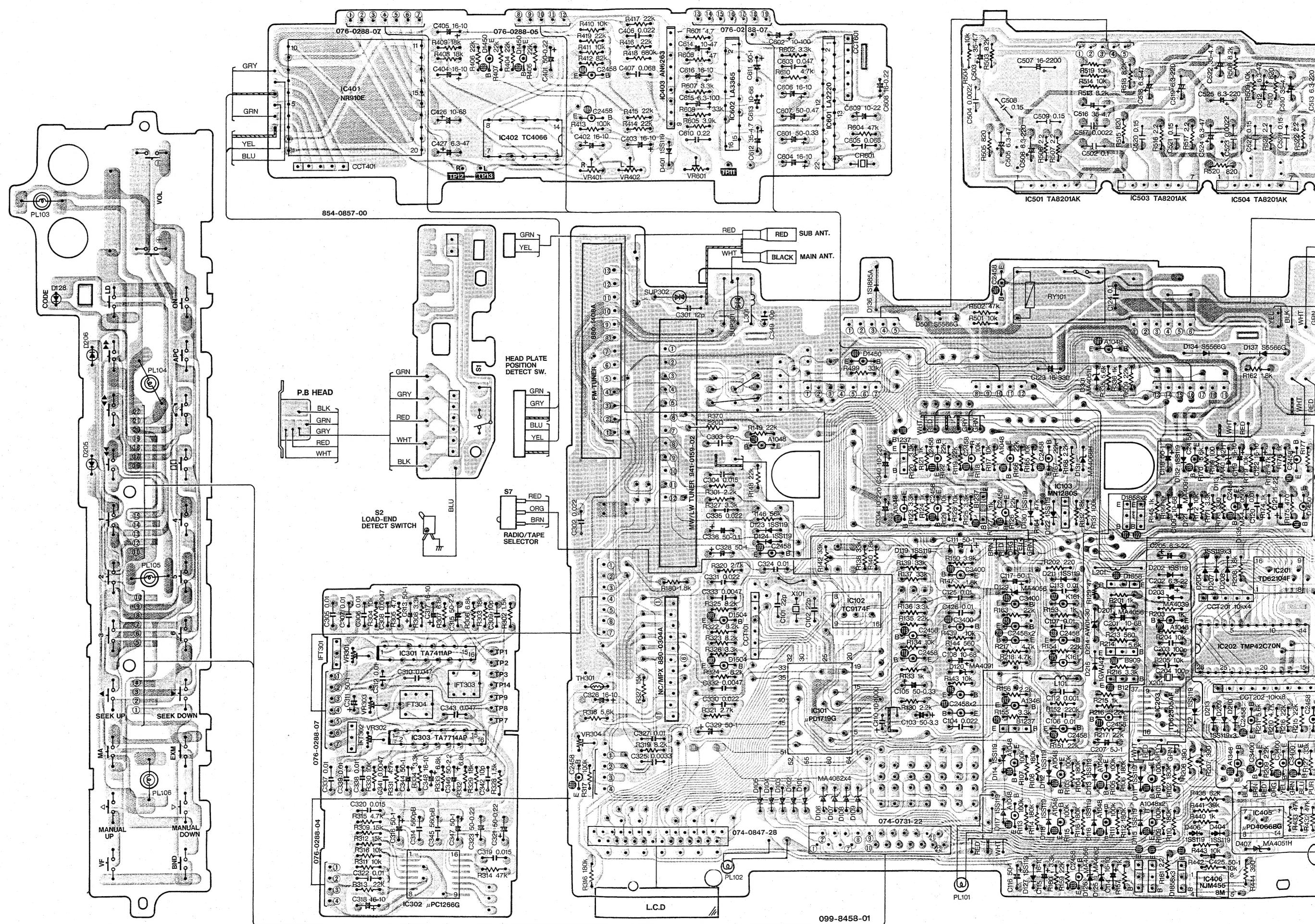
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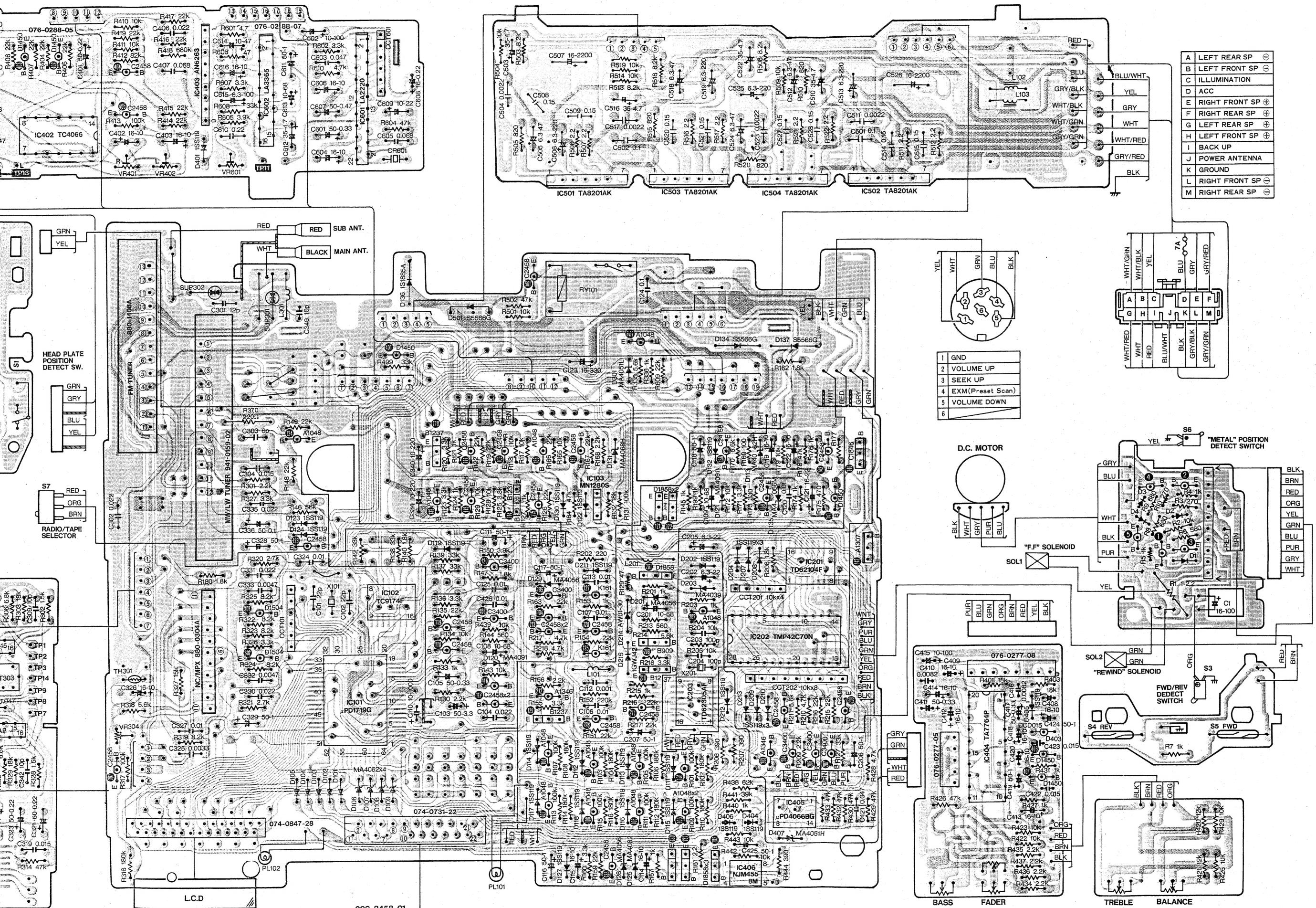




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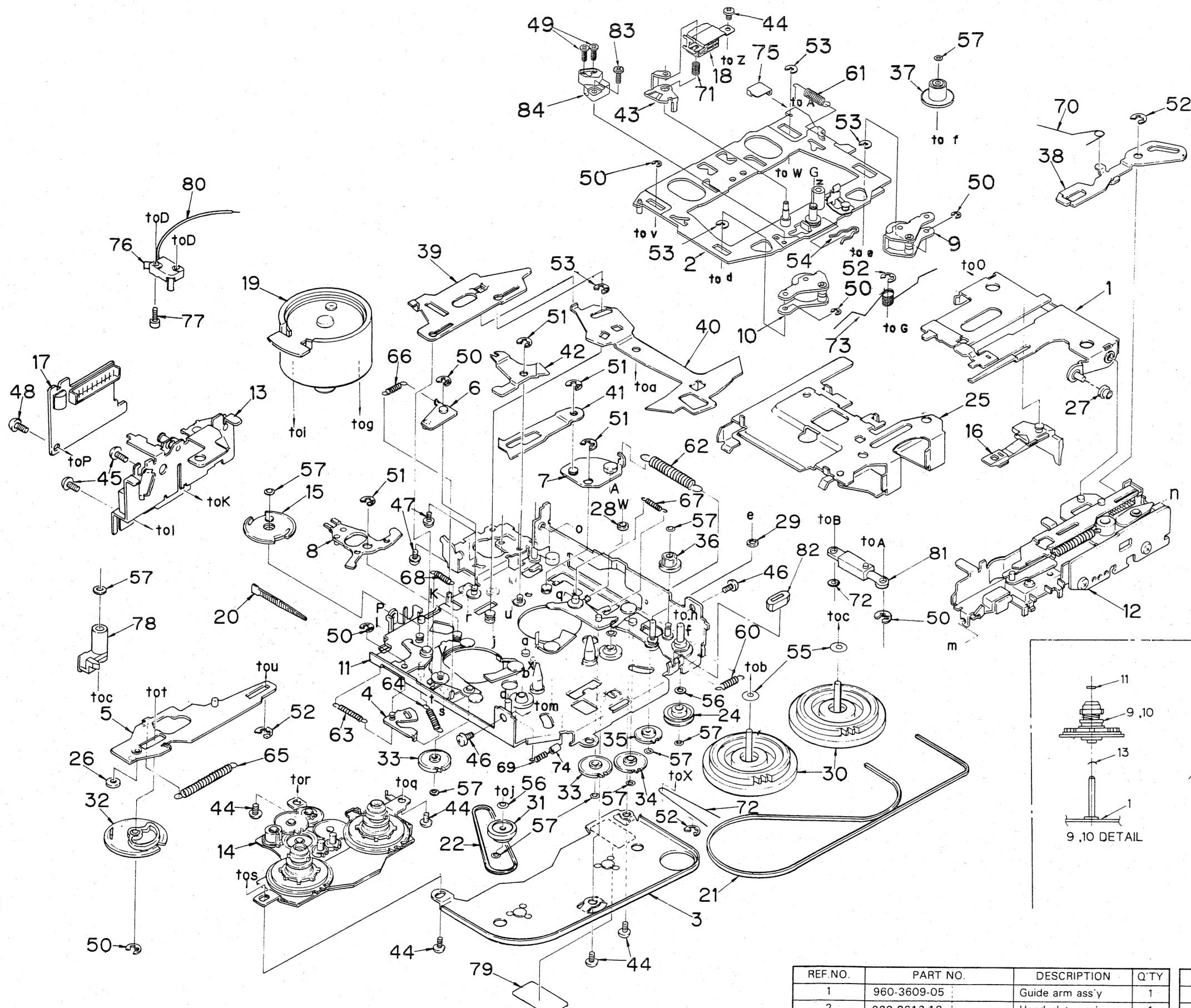
©PU-9359A-A





■ EXPLODED VIEW • PARTS LIST:

©Tape mechanism section 930-0530-20



REF.NO.	PART NO.	DESCRIPTION	Q'TY
1	960-3609-05	Guide arm ass'y	1
2	960-3612-16	Head plate ass'y	1
3	960-3617-01	Flywheel-P ass'y	1
4	960-3626-02	Timing-P ass'y	1
5	960-3627-04	Power-P ass'y	1
6	960-3628-01	P-lock-P ass'y	1

REF.NO.	PART NO.	DESCRIPTION	Q'TY
7	960-3631-06	Power link ass'y	1
8	960-3632-02	REW-link ass'y	1
9	960-3738-02	Roller-F ass'y	1
10	960-3739-02	Roller-R ass'y	1
11	960-3638-17	Deck plate ass'y	1
12	960-3639-14	Frame-sub ass'y 12	1

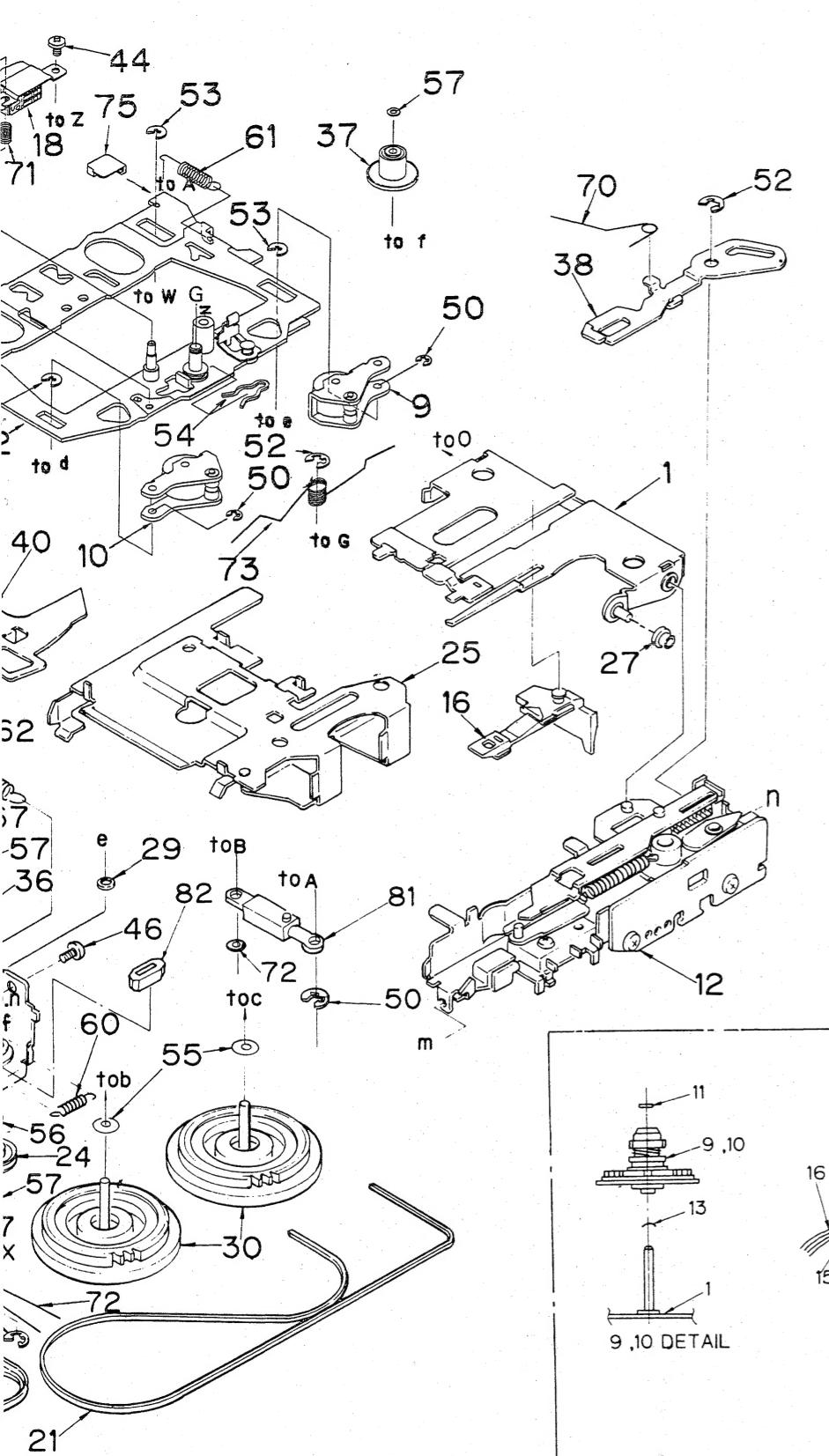
REF. NO.	PA
13	960-3640
14	960-3641
15	960-3642
16	960-3643
17	099-7670
18	011-0308

(12) 960

NO	PA
1	960
2	960
3	630
4	960
5	960
6	820
7	960
8	613
9	613
10	750
11	750
12	099
13	076
14	076
15	013
16	013
17	013
18	806
19	610
20	716
21	714
22	716
23	716
24	743
25	743
26	743
27	746
28	746
29	745

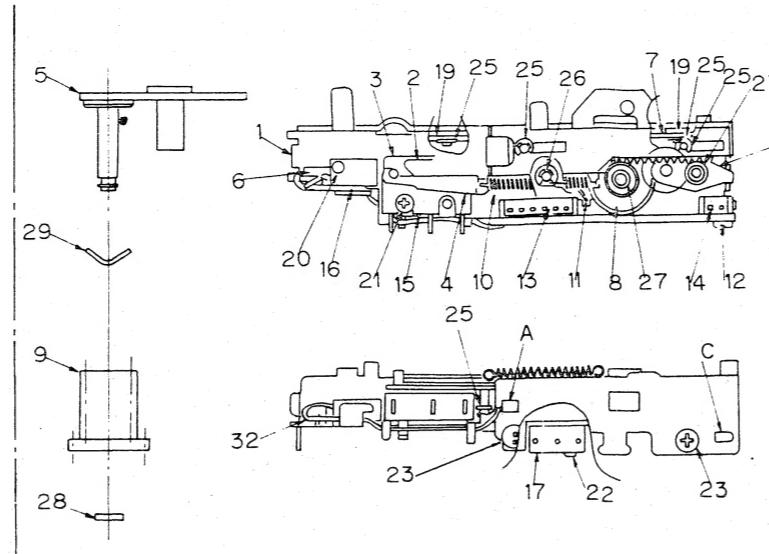
NO	PAF
1	960-
2	960-
3	960-
4	750-
5	750-
6	714-
7	716-
8	743-
9	013-
10	015-
11	803-
12	804-
13	805-
14	015-

PART NO	REMARKS
960-3613-05	REEL B
613-0061-01	POWER
613-0062-00	POWER
613-0062-02	P-IDEI
613-0063-00	POWER
613-0064-01	POWER
613-0055-00	POWER
613-0059-00	IDLER
960-3624-02	REEL B
960-3635-02	REEL B
746-0716-01	WASH-N
746-0720-02	WASH-N
746-0712-01	WASH-N
013-3707-00	SWITC
802-0615-00	VINY
801-0615-00	VINY
099-7215-02	P W B
111-1021-91	FILM F
116-0529-01	WASH-N

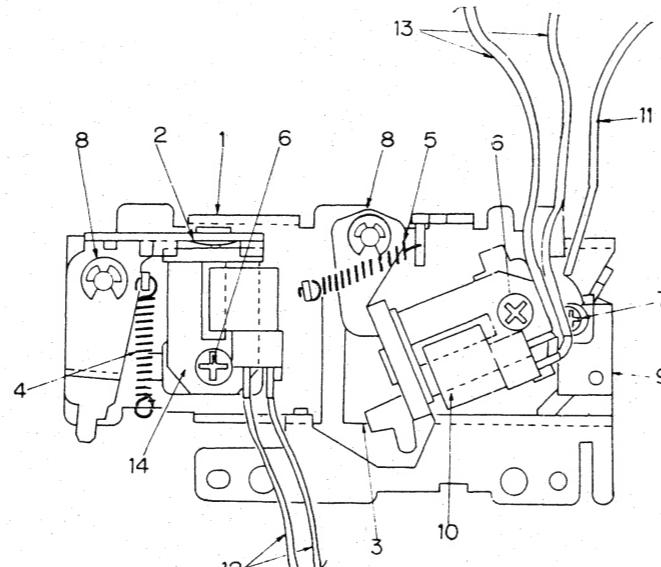


REF.NO.	PART NO.	DESCRIPTION	Q'TY
1	960-3609-05	Guide arm ass'y	1
2	960-3612-16	Head plate ass'y	1
3	960-3617-01	Flywheel-P ass'y	1
4	960-3626-02	Timing-P ass'y	1
5	960-3627-04	Power-P ass'y	1
6	960-3628-01	P-lock-P ass'y	1

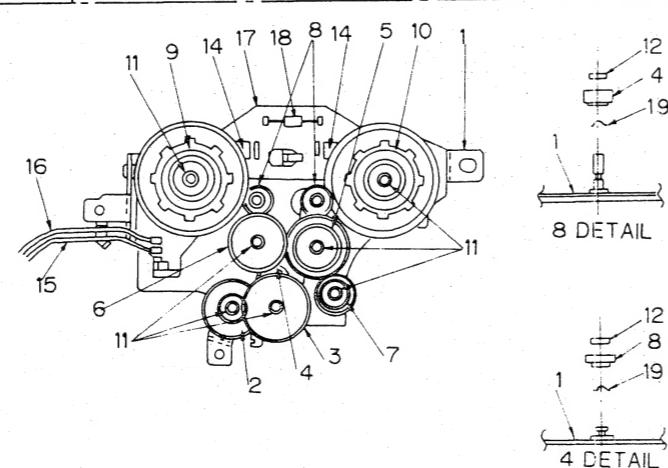
REF.NO.	PART NO.	DESCRIPTION	Q'TY
7	960-3631-06	Power link ass'y	1
8	960-3632-02	REW-link ass'y	1
9	960-3738-02	Roller-F ass'y	1
10	960-3739-02	Roller-R ass'y	1
11	960-3638-17	Deck plate ass'y	1
12	960-3639-14	Frame-sub ass'y	1



⑫ 960-3639-14 Frame-sub ass'y			
NO	PART NO.	DESCRIPTION	Q'TY
1	960-3611-10	FRAME-ASSY	1
2	960-3619-06	EJ-ARM-P-ASSY	1
3	630-1758-06	EJ RACK PLATE	1
4	960-3621-02	SW-LINK-ASSY	1
5	960-3620-06	SWING-P-ASSY	1
6	820-3005-02	VINYL-TUBE	1
7	960-3618-03	EJECT-P-ASSY	1
8	613-0076-02	EJECT GEAR	1
9	613-0075-02	SWING GEAR	1
10	750-2404-00	EJ-RACK SPRING	1
11	750-2419-01	EJ GEAR SPRING	1
12	099-4435-03	P.W.B	1
13	076-0277-06	PLUG	1
14	076-0277-02	PLUG	1
15	013-2690-05	SWITCH	1
16	013-3757-00	SWITCH	1
17	013-3780-00	SWITCH	1
18	806-0607-60	VINYL-COAT-WIRE	1
19	610-0268-00	EJECT ROLLER	2
20	716-0670-00	SCREW	1
21	714-2308-11	MACHINE SCREW M2 3x8	1
22	716-0656-00	SCREW	1
23	716-0777-01	SCREW	2
25	743-1500-10	E-RING	5
26	743-2000-10	E-RING	1
27	746-0761-00	WASHER	2
28	746-0762-00	WASHER	1
29	745-0737-00	WASHER	1



⑬ 960-3640-09 Side-P-sub ass'y			
NO	PART NO.	DESCRIPTION	Q'TY
1	960-3610-06	SIDE PANEL-ASSY	1
2	960-3623-05	PL-LINK-A-ASSY	1
3	960-3624-06	PL-LINK-B-ASSY	1
4	750-2408-00	PL-SPRING-A	1
5	750-2409-02	PL-SPRING-B	1
6	714-2606-11	MACHINE SCREW M2 6x6	2
7	716-0670-00	SCREW	1
8	743-1500-10	E-RING	2
9	013-3757-00	SWITCH	1
10	015-0232-02	PLUNGER	1
11	803-0608-60	VINYL-COAT-WIRE	1
12	804-0606-60	VINYL-COAT-WIRE	2
13	805-0609-60	VINYL-COAT-WIRE	2
14	015-0238-00	PLUNGER	1



⑭ 960-3641-07 Reel-B-sub ass'y			
NO	PART NO.	DESCRIPTION	Q'TY
1	960-3613-05	REELBASE-P-ASSY	1
2	613-0061-01	POWER GEAR A	1
3	613-0062-00	POWER GEAR B	1
4	613-0066-02	P-IDLER GEAR	1
5	613-0063-00	POWER GEAR C	1
6	613-0064-01	POWER GEAR D	1
7	613-0065-00	POWER GEAR E	1
8	613-0069-00	IDLER GEAR	2
9	960-3634-02	REELBASE-F-ASSY	1
10	960-3635-02	REELBASE-R-ASSY	1
11	746-0761-00	WASHER	7
12	746-0762-00	WASHER	3
13	746-0712-01	WASHER	2
14	013-3707-00	SWITCH	2
15	802-0615-60	VINYL-COAT-WIRE	1
16	801-0615-60	VINYL-COAT-WIRE	1
17	099-7216-02	P.W.B	1
18	111-1021-91	FILM RESISTOR (14WSS1KΩ)	1
19	745-0678-01	WASHER	3

REF NO.	PART NO.	DESCRIPTION	Q'TY
13	960-3640-09	Side-P-sub ass'y	1
14	960-3641-07	Reel-B-sub ass'y	1
15	960-3642-03	CH-gear ass'y	1
16	960-3643-03	Pack-ST ass'y	1
17	099-7670-03	P.W.B	1
18	011-0308-00	Head	1

REF.NO.	PART NO.	DESCRIPTION	Q'TY
19	SMA-105-100	Motor ass'y	1
20	335-0833-01	Clamp	1
21	602-0097-01	Belt-A	1
22	602-0098-02	Belt-B	1
23	750-2421-00	Change-A spring	1
24	604-0033-00	Tension pulley	1
25	606-0079-07	Pack guide	1
26	610-0266-00	Cam roller	1
27	610-0267-00	Guide roller	1
28	610-0281-00	Head-P-roller	1
29	610-0282-00	H-P-roller B	1
30	611-0072-02	Flywheel	2
31	613-0060-02	Pulley gear	1
32	613-0067-05	Cam gear	1
33	613-0070-00	FF-gear	2
34	613-0071-00	Loading gear-A	1
35	613-0072-00	Loading gear-B	1
36	613-0073-00	Loading gear-C	1
37	613-0074-01	Loading gear-D	1
38	630-1759-03	Eject arm	1
39	630-1760-02	Change plate	1
40	630-1761-01	Change arm	1
41	630-1762-03	Head lock plate	1
42	630-1763-01	FF-link	1
43	630-2350-02	Azimuth link	1
44	714-2003-81	Machinne screw (M2x3)	6
45	714-2603-81	Machinne screw (M2.6x3)	2
46	714-2604-81	Machinne screw (M2.6x4)	2
47	716-0347-00	Screw (MOTOR)	2
48	716-0777-00	Screw (P.W.B)	1
49	716-0833-01	Screw (AZIMUTH)	2
50	743-1500-10	E-ring (M1.5)	7
51	743-2000-10	E-ring (M2)	4
52	743-2500-10	E-ring (M2.5)	4
53	744-0031-10	E-ring	4
54	744-0028-00	Snap retainer	1
55	745-0646-00	Washer (FLYWHEEL)	2
56	746-0624-00	Washer	2
57	746-0761-00	Washer	10
60	750-2405-02	Loading spring	1
61	750-2406-03	Head-P-spring	1
62	750-2407-03	P-link spring	1
63	750-2410-00	G-lock spring	1
64	750-2411-00	Timing spring	1
65	750-2412-00	Power-P-spring	1
66	750-241		